



Education for Ethics

Investigating the Contribution of Animal Studies to
Fostering Ethical Understanding in Children

by

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Declaration of Originality

This thesis contains no material which has been accepted for a degree or diploma by the University or any other institution, except by way of background information and duly acknowledged in the thesis, and to the best of my knowledge and belief no material previously published or written by another person except where due acknowledgement is made in the text of the thesis, nor does the thesis contain any material that infringes copyright.

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Statement of Ethical Conduct

The research associated with this thesis abides by the international and Australian codes on human and animal experimentation, as approved by the Human Research Ethics Committee (Tasmania) Network – Social Science, Ethics Reference No. H0013094.

Amanda Yorke

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Abstract

Educational strategies with the explicit purpose of developing children's understanding of ethical concepts and the enactment of ethical behaviours have evolved over time to address changing expectations. Over recent years, educational strategies involving animals have gained popularity and a number of questions arise from this. What are the aims and current approaches of animal-focused educational strategies? What is understood about the contribution of human-animal relationships to ethical development? Is it possible for animal-focused educational strategies to contribute to the realisation of the aims of the Australian Curriculum?

This study was initiated in response to an identified gap in existing research concerning the current aims of education for the promotion of ethical understanding, the role of human-animal relationships in the development of ethical understanding in children, and the potential contribution to education that could be made by recognition of the connection between these two aspects. The completion of this study fulfilled three objectives; to provide a critical review of current approaches to animal-focused educational strategies, to identify the role of human-animal relationships in the development of ethical understanding in children, and to investigate what contribution can be made by curriculum-based

Animal Studies to the promotion of multidimensional ethical understanding in children.

The research objectives were addressed by employing a mixed methods research approach to conduct a small-scale case study in a one group pre-test – post-test convergent parallel design. A four-week Animal Studies Literacy Program was completed by students between pre-test – post-test administrations. In the absence of comparative studies or existing frameworks addressing the specific focus of this study, an investigative framework was constructed to include quantitative and qualitative data collection instruments. Quantitative instruments comprised the Defining Issues Test (DIT-2), the Griffiths Empathy Measure-Parent Report, the Pet Attitude Scale (Modified), and the Ethical Understanding Curriculum Questionnaire. Qualitative measures included group interviews and written responses to the Animal Studies Literacy Program. The sample population comprised 12 students enrolled in year 7 or year 8 and attending timetabled Literacy lessons, one parent or carer of each student participant, and two teachers. The setting was a Kindergarten-Year 10 Catholic College in Tasmania, Australia.

The study provides a comprehensive critical review of current animal-focused approaches relevant to the aims of education for the promotion of ethical understanding. The findings of the case study confirm the multidimensional nature of ethical understanding through the measurement of the development of the dimensions pertinent to ethical judgement, ethical sensitivity, ethical character,

and ethical identity. The findings have global significance for the field of moral education and the multidisciplinary field of Animal Studies. The isolated assessment of individual dimensions of ethical understanding, to what extent these are being realised in the sample for this study, and how they may be better achieved has significance for the teaching and assessment of educational practices designed to foster the promotion of ethical understanding. Further, the findings of this study, which highlighted the potential role of human-animal relationships in children's general development but more specifically in the multidimensional development of ethical understanding, will inform the appropriate inclusion of animal-focused educational strategies and the representation of animals within the educational environment. In researching these aspects, future consideration to the inclusion of Animal Studies in educational practices aimed at fostering the promotion of ethical understanding is encouraged.

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CHAPTER 1

INTRODUCTION

Educational strategies with the explicit purpose of developing children's understanding of ethical concepts and the enactment of ethical behaviours have evolved over time to address changing expectations. Over recent years, educational strategies involving animals have gained popularity and a series of questions have emerged; what are the aims and current approaches of animal-focused educational strategies, what is understood about the contribution of human-animal relationships to ethical development, and is it possible for animal-focused educational strategies to contribute to the realisation of the aims of the Australian Curriculum? Amidst the growing recognition of the role of animals on children's social and emotional development, and the increasing interest in animal-focused educational programs that aim to improve generalised humane attitudes and ethical behaviours, is it possible that such programs have an additional capacity to contribute to the development of cognitive aspects of ethical understanding? If so, can this be measured and the results used to inform the inclusion of curriculum-based Animal Studies in education for the purpose of realising educational aims to foster the promotion of ethical understanding in children?

In light of predictions that educational institutions into the future will become increasingly responsible for 'core values' and 'social capabilities' (UNESCO, 2007), it is evident that consideration needs to be given to all possible influences on children's moral development. One such influence is the role of

human-animal relationships in children's lives. The influence of animals on the physical and psychological health, and social and emotional wellbeing of humans is the subject of extensive research (e.g., Friedmann, 1995; Friedmann & Thomas, 1995; Garrity & Stallones, 1998; Gullone, Johnson, & Volant, 2004). However, to date, there are no available empirical studies specifically focused on the influence of animals on the promotion of children's ethical understanding. It is argued that one way to foster the development of ethical understanding in children is through the inclusion of integrated Animal Studies within school curriculum.

1.1 Research Questions

The purpose of this study was to investigate the aims of education to develop students' capabilities in recognising, understanding, and resolving moral issues and to examine the potential contribution of curriculum-based Animal Studies to the fostering of such capabilities, specifically in the context of the Australian curriculum general capability 'Ethical understanding'. To address these objectives, dominant aspects of inquiry were constructed to guide and inform the investigation, and support the collection of meaningful data. These aspects were framed by the following research questions:

RQ1 What are the aims and approaches of animal-focused educational strategies?

RQ2 What role can human-animal relationships play in fostering the development of ethical understanding in children?

RQ3 How can the inclusion of Animal Studies within the Australian

curriculum contribute to the aims of education to foster the promotion of ethical understanding?

Each of the three research questions informed the research design and determined the investigative framework employed to address the research objectives. The first two research questions were addressed through an exploration of the literature relating to the role of animals in society, human-animal relationships, and the representation of animals in education. A comprehensive critical review of current aims and approaches of animal-focused educational strategies was undertaken and presented within Literature Review Part B. Understandings gained from research questions 1 and 2 informed the design of the case study conducted to investigate research question 3.

Research question 3 was addressed by employing a mixed methods research approach to conduct a small-scale case study in a one group pre-test – post-test convergent parallel design. A four-week Animal Studies Literacy Program (ASLP) was completed by students between pre-test – post-test administrations. In the absence of comparative studies or existing frameworks specifically addressing the development of ethical understanding, an investigative framework was constructed to include quantitative and qualitative data collection instruments.

Quantitative instruments comprised the Defining Issues Test (DIT-2), the Griffiths Empathy Measure-Parent Report, the Pet Attitude Scale (Modified), and the Ethical Understanding Curriculum Questionnaire. Qualitative measures included group interviews and written responses to the ASLP. The sample

population comprised 12 students enrolled in year 7 or year 8 and attending timetabled Literacy lessons, one parent or carer of each student participant, and two teachers.

Analysis of quantitative and qualitative data collected through the case study addressed research question 3, and provided further insights relating to research questions 1 and 2.

1.2 Background to the Study

Over recent decades, global educational futures research has strived to identify key components of a 21st century education that will best prepare young people for a complex and uncertain future. An early contribution towards the investigation was delivered in a report by the Australian researchers Beare and Slaughter (1993). Within the report, the authors suggested the need to implement teaching strategies focused on wholeness, balance, connectedness, identity, and individual values. Looking further into the future, the United Nations Educational, Scientific, and Cultural Organisation (UNESCO) produced the *Kronberg Declaration on the Future of Knowledge Acquisition and Sharing* (2007). The *Kronberg Declaration* predicted a dramatic change for educational institutions over the succeeding 25 years and anticipated that although new technologies might determine that online learning communities would dominate many educational practices, that “traditional schools will remain as institutions for providing core values and social competencies” (p. 2). Furthermore, the document recommended that if schools are to fulfil such a role, that “the educational institutions of the

future need to dedicate themselves much more intensively to emotional and social capabilities, and convey a more extensive, value-oriented education concept” (p. 2).

Recognition of the need for an increased emphasis on values-based educational practices was also evident within the *Melbourne Declaration on Educational Goals for Young Australians* adopted by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) in 2008. The *Melbourne Declaration* described a number of goals for young Australians and recognised the role of schools in promoting the development of those goals. Included within the goals, it is explicitly stated that schools have a responsibility to contribute to the moral development of students (p. 3). Further evidence of a changing concept of education is highlighted in a statement recognising that, “an Australian Curriculum in the 21st century needs to acknowledge the changing ways in which young people will learn and the challenges that will continue to shape their learning in the future” (Australian Curriculum Assessment and Reporting Authority [ACARA], 2010, p. 6). The changing concept of education was similarly reflected in the rationale for the Australian Curriculum, which described the critical role of education in shaping the future of students, and acknowledged that “to play this role effectively, the intellectual, personal, social and educational needs of young Australians must be addressed at a time when ideas about the goals of education are changing and will continue to evolve” (ACARA, 2012b, p. 5).

The goals described by the *Melbourne Declaration*, were explicitly identified as providing instrumental guidance to the construction and implementation of the Australian Curriculum, with both documents identifying the aims of education and recognising “the importance of knowledge, skills and understanding of learning areas, general capabilities and cross-curriculum priorities as the basis for a curriculum designed to support 21st century learning” (ACARA, 2012a, p. 4). However, in practice the effective realisation of the aims of education are dependent on the effective implementation, teaching and assessment of curriculum in a way that meets the intention behind the aims. In particular, it is necessary to consider whether curriculum content choices are informed by an integrated approach to educational theory that encompasses socio-emotional and moral developmental perspectives associated with the global research.

Given the acknowledgment of the importance of moral development and the changing concept of education reflected in goals and aims, how is the development of ethical understanding catered for amidst current concerns relating to evidence of a crowded curriculum and the focus on standardised testing and academic achievement (e.g., Lingard, 2010). Empirical studies in the United Kingdom and America have shown that the introduction of standardised testing resulted in a significant reduction in the amount of time devoted to social sciences, arts and physical education (House of Commons, 2007; Jones, Jones, & Hargrove, 2003). In addition to the impact on teaching content, standardised assessments increase

the priority given by teachers to measurable learning outcomes (Jones, 2007; Osborn, 2006), thus reducing the priority assigned to less quantifiable outcomes including social and emotional skills, and moral development. Furthermore, the impacts of standardised testing on curriculum content have been shown to result in changes to pedagogy. For example, a comparative study of the United Kingdom, Denmark and France found that due to the increased focus on standardised assessment, teachers in England considered transmitting knowledge and skills as having taken priority over pastoral care (Osborn, 2006). In the Australian context, the delivery of strategies within education aimed at supporting the social, emotional and moral development of children is encompassed within the umbrella term “values education” (Department of Education, Employment and Work Relations [DEEWR], 2008, p. 2).

In describing recommendations for the provision of values education, the Values Education Good Practice Schools Project Report contended that “values education is not a discrete program or part of an implicit hidden curriculum; it is a central principle underpinning the school curriculum offerings, the curriculum design, pedagogy, content and assessment” (DEEWR, 2008, p. 10). The report provides a rationale for the advantages of positioning values education as a central principle; however, this position also exposes the provision of values education to the proclivities of individual schools and teachers, and changing education policies. Further indication of the inclination towards an integrated approach to the provision of education aimed at the development of students’ social, emotional and

moral capabilities is evident in the Australian curriculum. The present Australian curriculum (version 7.5) comprises learning area content complete with achievement standards, seven general capabilities described as “important for the life and work in the 21st century” (ACARA, 2015a, para. 2) and three cross-curriculum priorities. The general capabilities, which currently comprise ‘literacy, numeracy, information and communication technology capability, critical and creative thinking, personal and social capability, ethical understanding, and intercultural understanding’, are supported by learning continua describing the standard of achievement expected of students at specified year levels. Rather than inclusion as additional subjects, the general capabilities, along with the cross-curriculum priorities, “are dealt with, where relevant, through the learning area content on which the curriculum is built” (ACARA, 2015a, para. 2).

Within the introduction for the general capability Ethical Understanding it is claimed that:

Students develop ethical understanding as they identify and investigate the nature of ethical concepts, values and character traits, and understand how reasoning can assist ethical judgment. Ethical understanding involves students in building a strong personal and socially oriented ethical outlook that helps them to manage context, conflict and uncertainty, and to develop an awareness of the influence that their values and behaviour have on (ACARA, 2015a, para. 1)

Such a description identifies that within the Australian curriculum, the aim to develop students' capabilities in recognising, understanding, and resolving moral issues is not delivered as a discrete learning area or program, but as an embedded practice aimed at fostering the promotion of ethical understanding.

There is potential for the conflict between curriculum priorities and pedagogical practices to magnify when content demands complex understanding and analysis, such as might be the case when considering aspects of social, emotional or moral development. The conflict implies that to satisfy the requirements of improved learning outcomes it is necessary to neglect areas of education not focused on measurable outcomes, such as the inclusion of values-based pedagogies aimed at the promotion of children's ethical understanding. However, an emerging body of research indicates that this conflict might be a false dichotomy. Recent studies show that an emphasis on values-based pedagogy has mutual benefits for improved learning outcomes in all curriculum areas (Department of Education, Science and Training [DEST], 2006; Lovat, 2007; Lovat & Toomey, 2009; Lovat, Toomey, Clement, Crotty, & Nielson, 2009) whilst also supporting student wellbeing (Toomey, Lovat, Clement, & Dally, 2010).

1.2.1 The Pedagogical Gap in Education to Foster the Promotion of Ethical Understanding

In response to global and local calls to maintain, emphasise, or reintroduce values in schooling, there is a growing literature concerning moral education in

schools (e.g., Cawsey, 2002; Lovat & Schofield, 1998; Lovat, Schofield, Morrison, & O'Neill, 2002; Newell, & Rimes, 2002; Tarlinton & O'Shea, 2002). However, despite descriptions of clear aims and expectations within the documents that guide curriculum development, the existing literature exposes a gap, both in studies that identify effective pedagogies aimed at developing students' capabilities in recognising, understanding, and resolving moral issues, and in the availability of instruments to assess such capabilities in children. One of the objectives of this current study was to define the aims of education for the development of moral capabilities in the 21st century and to identify how the realisation of such aims is to be achieved, especially in the context of ACARA's aim to foster the promotion of ethical understanding.

1.2.2 An Alternative Pedagogical Approach to Ethical Understanding

Parallel to the calls for an alternative, values-based paradigm for education in the 21st century, the shifting role of non-human animals in the lives of humans has been described as indicative of a decline in human-centric perspectives and the emergence of a bio-centric paradigm in society (Shapiro, 2002). As an example of the evolution of the human-non-human animal relationship, recent scientific discoveries indicate that the first domestic association between humans and wolves occurred up to 40,000 years ago (Skoglund, Ersmark, Palkopoulou, & Dalén, 2015). The original affiliation between humans and wolves has since developed into the recognition of the natural capabilities of canines and the benefits these afford humans. The physical and emotional capabilities of dogs continue to cement

their ongoing relationship with humans as further benefits to health, wellbeing, and society are identified, including the ability to detect cancer (Cornu, Cancel-Tassin, Ondet, Girardet, & Cussenot, 2011), provide companionship (Adkins & Rajcecki, 1999), offer protection and crime prevention (Dorriety, 2005), and assist in emergency situations (Jones, Dashfield, Downend, & Otto, 2004). Such benefits are not limited to the human-canine relationship as an increasingly diverse number of species are recognised as contributing to human lives. The majority of existing literature focusing on the role of non-human animals in human lives concerns the positive psychological, psychotherapeutic, and medical outcomes gained by humans from interaction with companion animals. For example, studies have found that positive interactions with animals have reduced depression (Triebenbacher, 2000), increased social interaction (Hart, Hart, & Bergen, 1987; Lockwood & Hodge, 1986), minimised the effects of loneliness (Adkins & Rajcecki, 1999; Garrity, Stallones, Marx, & Johnson, 1989), and reduced stress (Allen, Blascovich, & Mendes, 2002; Siegel, 1990). The burgeoning fields of Animal Studies and Humane Education have recognised the benefits of animal-focused humane education for children's social skills and emotional development, and a number of studies specifically focused on the role of animals in children's development have reported improved humane attitudes (Kellert & Westervelt, 1983), increased concern for animal and human welfare (Serpell, 1999), and increased sensitivity to the feelings and attitudes of others (Fawcett & Gullone, 2001). While these are clearly related to several aspects relating to the fostering of

ethical understanding, an area that is absent in existing literature is that of the influence of animals on children's development of ethical capabilities. The second objective of this current study was to identify the role of human-animal relationships in the development of ethical understanding in children.

Despite the well-established and documented association between human and non-human animals, the role of non-human animals in an educational context remains largely unexplored. An area of research that might aid in the exploration of animals in the educational context is the field of Animal Studies. Animal Studies is a multi and interdisciplinary field that focuses on the study of the interactions and relationships between human and non-human animals. As a multidisciplinary subject, Animal Studies interconnects fields of study as diverse as Law, Philosophy, History, Arts, Media studies, Science, and Technology yet remains united by a resolve to challenge anthropocentrism, to account for the interests and agency of animals, and to discover new ways of thinking about human-animal relationships (DeMello, 2012). Researchers in Animal Studies examine definitions of humanity in relation to animals, the extent to which representations of non-human animals inform knowledge and understandings of the world, and reconceive traditional categories in the context of a renewed reverence for animal life. Recent decades have seen significant growth in Animal Studies. In a comprehensive analysis of the Animal Studies field, Paul Waldau (2013) discussed the rise of interest in Animal Studies, with a specific focus on the disciplines of Law, Philosophy, and Critical Studies, and considered the potential

implications for other areas of research including education. Further indication of the growth of the field, is demonstrated by the increasing number of organisations, academic courses, and publications related to Animal Studies. The Animals and Society Institute (ASI) maintain a global list of policies, resources, publications, and courses; the extensiveness of the list confirms the breadth of interest in the field (ASI, 2015). Akin to the field of moral development, Animal Studies might be considered to have its origins in Philosophy. The publication of Peter Singer's book *Animal Liberation* (1975) attracted widespread interest in the relationship between human and non-human animals, gave rise to questions relating to the role of animals in human lives that had not previously been considered, and ultimately inspired the ideology of the animal rights movement (Francione, 1996).

1.3 Problem and Purpose

Globally and locally, there are increasing demands for the provision of education to fulfil both academic and moral outcomes. The focus on academic outcomes has given rise to extensive research and the introduction of international and national assessment initiatives including the Programme for International Student Testing (PISA) (Australian Council for Educational Research [ACER], 2015) and National Assessment Program in Literacy and Numeracy (NAPLAN) (ACARA, 2015d). However, recent NAPLAN data indicates that there have been no significant improvements in literacy or numeracy performance for Australian students, with 2015 results showing improvements nationally and in each state and territory, generally achievement has remained stable since 2011. The absence of

anticipated improvements in literacy and numeracy outcomes prompted the Australian Curriculum, Assessment and Reporting Authority (ACARA) CEO, Robert Randall to release the following statement: “The 2015 results show that at a national level we are seeing little change in student achievement in these important areas of learning. While stability is good, the community may well expect more improvement over time” (ACARA, 2015c, para. 2).

Similarly, expectations of moral education have inspired considerable research, especially in relation to the dual benefits of values-based pedagogy for both academic and moral education outcomes (Lovat et al., 2009; Toomey et al, 2010). However, although the values-based, whole-school, holistic approach advocated has received considerable attention, what has not, to date, been subjected to thorough investigation is the assessment of individual developmental needs of each child, and methods used to evaluate the approach.

1.4 Significance of the Study

An emerging area of research advocating a more holistic approach to education has contributed to the extensive body of existing literature focused on moral development. Through the exploration of current aims of education to foster the promotion of ethical understanding this current study offers further significant contributions to the field. The multidisciplinary field of Animal Studies is expansive and includes research in numerous aspects of human – non-human animal associations. To date, this current study is the first to expand on existing knowledge about the influence of animals on human lives, to explore the influence

of animals in the context of education, and to focus specifically on the role of human-animal relationships on the development of ethical understanding in children. As such, this study informs the appropriate representation and inclusion of animals in educational environments, and offers insights into the contribution of Animal Studies to the realisation of education aims, thus offering a significant contribution to the Animal Studies field.

1.5 Scope and Limitations of the Study

This study was conducted using a mixed methods approach incorporating a case study strategy for data collection. Limitations related to the quantitative and qualitative aspects of the research design bind the findings to the context of the study and limit the generalisability of the findings to other situations. The geographical location in which the research was conducted provides a limited population of available participants and a significant demand for research investigations. Invitations to participate in the study were presented to Tasmanian Department of Education schools and Tasmanian Catholic schools. Ultimately, the interest of the Catholic Education Office in the specific focus of the study influenced the researcher's decision to direct the recruitment of participants toward Catholic schools, and ultimately led to the school agreeing to participate being a Kindergarten – Year 10 Catholic College in Tasmania, Australia. The population selected through purposeful sampling was representative of the group under investigation for the study; that being students aged 12-13 years of age attending a school that employs teaching and assessment practices aligned with the Australian

Curriculum. While it is noted that the findings to have emerged from this study could be different if it had been conducted at a different school and are therefore not representative of a population other than the study sample, the method employed provides a model to inform future studies. The decision to include a case study in the research design was guided by Robert Yin's (2003) definition of case study research as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context especially when the boundaries between phenomenon and context are not clearly evident" (p. 13), which closely reflected the nature of objectives for this study. The selection of an appropriate sample size was informed by the research objectives, the research questions, the research design, and the number of available participants. Based on the need to support claims of validity in relation to quantitative aspects of the study, whilst also accommodating the depth of inductive analysis featured in the investigation of qualitative data, and to facilitate the inclusion of a range of perceptions and richness of data the sample comprised 12 students, 12 parents, and two teachers. Greater diversity of responses might be gained from a larger sample size.

Further limitations relate to the qualitative data collection processes. The inclusion of perceptual data gained through the analysis of perspectives and lived experiences during group interviews and through written responses, represents an interpretation exclusive to the context of this study that might not be applicable if conducted in different circumstances. Methods of data triangulation and steps taken to verify results and support accuracy of themes emerging from the

qualitative data are explicated in Chapter 4 subsection 4.2.3 and in the description of individual data collection instruments.

In addition to the limitations introduced through the selection of a research design appropriate to the research objectives, manageability of the project within the practical time and location constraints characteristic of a doctoral study undertaken by a sole researcher was preserved by the selection of pragmatic delimitations. The inclusion of a case study with the absence of a control group required consideration of the possibility of confounding variables including history, maturation, testing effect, and/or instrumentation effect (Slavin, 2007). Cohen, Manion, and Morrison (2007) claimed that when a one group pre-test post-test design is utilised, researchers cannot be certain that differences found are not from a variety of unaccounted for factors or confounding variables. However, the prospect of having results influenced by confounding variables was identified during the process of research design and measures were taken to minimise the possibility. The likelihood of history and maturation effects was minimal due to the short duration of research activities. The influence of testing and instrumentation effects were reduced by limiting testing to two administrations with no exposure to instruments between testing, and the collection and analysis of instruments by a single researcher. A further challenge associated with interpreting findings from a one group pre-test post-test design is that researchers are unable to determine whether the differences noted on pre-tests and post-tests are more or less than what should have been expected (Slavin, 2007). In this study, the

selection of quantitative data collection instruments with established norms assisted in the identification of expected scores for the sample. Further explication of the strategies employed to address delimitations is provided within Chapter 4 in the descriptions of individual data collection instruments.

1.6 Outline of the Thesis

Chapters 2 and 3 present the literature review and situate this current study within the existing literature. Due to the nature of the investigation, which intersects distinct research areas of moral development, moral education, and Animal Studies, the literature review is divided into two parts. Part A examines classic theories and current research related to moral development, considers four influential models of moral education, and addresses current policy, practice and pedagogy for values education, holistic education, and values-pedagogy in the Australian context. Part B of the literature review examines the changing role of animals in society with a focus on animal welfare, animal advocacy, animal law, and animal ethics. The role of animals is further examined through the investigation of human-animal relationships and the representation of animals in the context of education.

Chapter 4 presents a comprehensive account of the research approach, design, procedures and processes used in this study. An overview of the conceptual framework of analysis illustrating the procedures and products of data collection is provided. Finally, ethical considerations relating to this study,

including issues of representation and legitimation, trustworthiness, validity and credibility are discussed.

Chapter 5 presents the results of the analysis of quantitative and qualitative data obtained from questionnaires, focus group interviews, and the Animal Studies literacy activities.

Chapter 6 discusses the findings of the study in relation to the literature and the research questions.

Finally, Chapter 7 serves as a reflection on the aims, methodology, and research design of the project. The chapter presents conclusions derived from the research findings and offers recommendations for future consideration for practice, policy and research.

1.7 Summary of Chapter 1

This chapter has introduced the research context, purpose, research questions, scope and limits of the study. Further, the lack of research literature regarding the aims of education for the promotion of ethical understanding has been highlighted. Given the gap in research pertaining to the current aims to foster the promotion of ethical understanding, the role of human-animal relationships in the development of ethical understanding in children, and the links between these two areas in the educational context it is evident that research into this specialist area is warranted.

CHAPTER 2

LITERATURE REVIEW PART A

Introduction

As discussed in Chapter 1, at the time this study was completed there were no research studies available that addressed the precise focus of this investigation. In the absence of comparative studies relevant to the specific topic of this project, the literature review was structured to draw upon international and Australian research perspectives from the moral education and Animal Studies fields. In doing so, the review of relevant background material from both fields identified gaps in existing research and informed the selection of appropriate methodological approaches to investigate these gaps. In addition to supporting the purpose of this current study, and informing the methodological approach and design of the case study, the structure of the literature review explicitly addressed research questions 1 and 2. The literature review structure comprises two parts. Part A begins with a brief introduction to classic theories and current research relating to moral development before four influential models of moral education are described and discussed. Next, the Australian context is considered with a discussion on values education, holistic education and values-based pedagogy. Part A concludes with a synthesis of the reviewed literature, which is presented in the form of a definition of current aims of education for the promotion of ethical understanding.

The second part of the literature review examines the changing role of animals in society with a focus on animal welfare, animal advocacy, animal law,

and animal ethics. The role of animals is further examined by consideration of violent crime, domestic violence, empathy, education, values education, humane education, human-animal relationships. Finally, the conclusions drawn from Part A and Part B of the literature review are combined to illustrate the potential contribution of animals to the four identified dimensions of ethical understanding.

Research Questions

RQ1 What are the aims and approaches of animal-focused educational strategies?

RQ2 What role can human-animal relationships play in fostering the development of ethical understanding in children?

RQ3 How can the inclusion of Animal Studies within the Australian curriculum contribute to the aims of education to foster the promotion of ethical understanding?

2.1 Theories of Moral Development

Numerous approaches relating to the processes involved in moral development exist, for example: from the psychoanalytic tradition (Freud, 1961); from the behaviourist tradition (Aronfreed, 1976); from the social constructivist tradition (Bandura, 1991; Dobert, 1990; Durkheim, 1973; Gewirtz & Peláez-Nogueras, 1991; Simpson, 1974; Weinreich-Haste, 1984); and from the constructivist school (Dewey, 1916; Gilligan, 1980; Kohlberg, 1969; Mead, 1934; Piaget, 1965; Turiel, 1983; Vygotsky, 1986). Each approach has contributed to the

provision of moral education; however, the constructivist school has arguably attributed the greatest influence on the development of contemporary moral education and so this chapter begins with an overview of constructivist moral developmental theory and research and its influence on moral education.

2.1.1 Overview of Constructivist Moral Developmental Theory

Swiss psychologist Jean Piaget (1964) positioned cognitive, intellectual, and moral development within recognisable stages. Furthermore, he believed that cognitive advancement was dependent on the development of schemata that change over time as a child explores his physical and social environment. The processes of interpreting events in light of existing schema and constructing new schema to make sense of the environment are referred to as *assimilation* and *accommodation* respectively (1964, p. 10).

Expanding upon the work of Mead (1934), Piaget (1965), and Vygotsky (1986), Lawrence Kohlberg examined the development of reasoning about moral issues and identified a developmental sequence of qualitative changes in reasoning about the moral right (Kohlberg, 1971, 1984). Additionally, Kohlberg and his colleagues examined how this development is influenced by particular social interactions as well as the larger moral environment (Higgins, 1984; Kohlberg, 1969, 1987; Power, Higgins, & Kohlberg, 1989). Kohlberg's stages have four distinct characteristics: (1) they denote distinct or qualitative differences in modes of thinking at different developmental levels; (2) these different modes of thought

are sequential and individual development may be enhanced, impaired or ceased due to social or cultural influences; however, the sequence is not affected; (3) each of the different modes of thought contribute to the organisation of thoughts that determine the response to any given task; and (4) the cognitive stages are integrations. Stages form a hierarchical order of:

Increasingly differentiated and integrated structures to fulfil a common function...[Each stage] includes all the structural features of [the previous stage] but at a new level of organization ... However, there is a hierarchical preference within the individual, i.e., a disposition, to prefer a solution at the highest level available to him. (Kohlberg, 1969, pp. 352–353)

In regards to this fourth characteristic, both Piaget and Kohlberg stressed that reasoning using the more complex structures available at the advanced stages is superior than at lower stages due to the increasing integration and differentiation of thought structures.

The five stages of moral development identified by Kohlberg (1984) are outlined as follows in Table 2.1:

Table 2.1 <i>Kohlberg's Stages of Moral Development</i>	
Stage 1	Typically achieved by 4 to 7 year-olds, defines doing right as following the rules that have been distributed by authority figures. The reason for obeying these rules is often fear of punishment or an unquestioning

	regard for authority. Children at this stage also define the right as avoiding physical harm to objects or others
Stage 2	Typically achieved by 8-12 year-olds, the individual determines what is right exclusively in terms of his own, or another's individual interest. Fairness is an issue at this level, but is understood only in instrumental, concrete terms and is focused on serving the individual's needs, interests, and desires. At this stage, the individual is able to reflect on his own thoughts and feelings and is capable of understanding that other people may have different thoughts and feelings but is not proficient at adopting another's perspective
Stage 3	Typically achieved by adolescence, the individual gains an awareness of the abstract thought processes of other persons. The ability to infer what others are thinking and feeling is employed when making moral decisions. The focus at this stage is to gain a sense of happiness or satisfaction and moral decisions are framed in terms of upholding conventional human relationships
Stage 4	Occasionally appears in adolescence but is achieved more frequently in adulthood, individuals advance from the capability to understand the thoughts or feelings of a known other and are able to apply the concepts of moral reasoning to more complex generalisations of other, such as; groups, society or species. The priority at this stage is to balance the pursuit of individual interests with the desire to uphold society norms
Stage 5	Achieved by only a small percentage of adults. At this stage, an individual is proficient at identifying, analysing, and coordinating thought systems, and does so with reference to a consistent set of self-chosen values, relying upon coordinated, formal thought mechanisms. Moral reasoning extends to consideration for issues requiring a humane choice that might conflict with legal or societal requirements

In Kohlberg's model, an individual is considered to be operating at a particular stage when they consistently construct arguments at that stage level on standardised dilemmas (Colby et al., 1987a, 1987b). The main stage at which an individual reasons under these circumstances is referred to as the modal stage; research has demonstrated that individuals typically understand and apply moral reasoning one half to one stage higher than the modal stage (Rest, 1986). Research results also indicate that an individual can comprehend and reconstruct reasoning at stages lower than his own, but can neither reason spontaneously nor reconstruct reasoning more than one and a half stages beyond his modal stage (Sprinthall & Sprinthall, 1987).

Critics of Kohlberg's theory have suggested that the theory is gender biased towards males, and that the stages of development are not universal across cultures as claimed. Gilligan (1980) and Noddings (1984) each claimed that Kohlberg's model does not adequately represent the moral thought of women. Gilligan (1980) noted that the generally accepted stage theory of moral development derives solely from research on male participants. Gilligan proposed that men and women have different orientations toward moral development, and that for women morality is concerned with caring and responsibility, whereas men have an orientation towards justice. Further, Gilligan argued that the stages reflect a distinctly male-orientation socialised thinking pattern, resulting in females scoring lower on the measures (typically stage 3 as opposed to the average male score of stage 4 or 5)

and suggests that if Kohlberg's scale were more sensitive to female interpersonal orientations and cognitive thinking more women would score beyond stage 3.

Several studies have been conducted that examine gender differences using Kohlberg's measurement system, but few of these have found significant gender differences in the structure of reasoning once age and education are taken into account, and the differences that have been found do not systematically favour one gender over the other (Braebeck, 1982; Colby & Damon, 1983; Walker, 1984). Criticisms have also been made of cultural bias and non-universality (e.g., Garbarino & Bronfenbrenner, 1976; Schweder, 1986; Weinreich-Haste, 1984); however, cross-cultural studies demonstrate universality of structure, sequence, and acquisition of moral reasoning stages across cultures (Snarey, 1985).

Kohlberg's (1987) stages of moral development describe the progressive achievement of processes necessary for moral judgment; however, Kohlberg also recognises that moral judgement alone is not sufficient for moral action and that "other factors of knowledge and motivation that are not distinctively moral may be required for assuring a good outcome" (p. 272).

2.2 Dimensions of Morality

Several studies of moral reasoning and action demonstrate that moral judgments alone cannot account for moral behaviour, though subjects at more advanced stages are more likely to act in accord with their judgments than those at lower stages. For example, in order to assess the effect of stages of moral

reasoning on moral action, moral reasoning stages were assessed for the participants in Milgram's (1963) renowned obedience experiment. The results showed that whereas only 13% of participants who reasoned at lower stages of moral reasoning refused to continue to administer shocks when ordered to by the experimenter, a much higher percentage (75%) of subjects who reasoned at higher stages refused to continue (Sprinthall & Sprinthall, 1987). In an experiment by McNamee (1977), 75% of stage 5 participants offered assistance to another unknown participant who was in distress, whereas only 38% of stage 4, 27% of stage 3, and 9% of stage 2 participants offered assistance. Similarly, Blasi (1980) found a strong relationship between higher stage reasoning and consistently altruistic behaviour, and that individuals operating at lower stages were less resistant to social influence than those at higher stages. The realisation that moral action or moral behaviour is influenced by factors other than moral judgement led to the emergence of models of moral development that account for these factors.

Several researchers expanded beyond the analysis of moral reasoning and adopted alternative approaches to explore aspects of moral development, for example; Armon's (1984) study of the development of reasoning about the moral good, Selman's (1980) research on the development of perspective-taking, Fowler and Vergote's (1980) investigations into reasoning about religion and faith, and Turiel's (1983) work identifying differentiated reasoning in the personal, conventional, and moral domains.

Strongly influenced by Kohlberg's stage theory, psychologist James Rest (1984) developed a model of moral development incorporating four separate components. Rest's Four Component Framework differentiated between four separate aspects identified as contributors to successfully approaching a moral situation. Firstly, the ability to identify a moral problem, determine who the affected parties are, and identify alternative solutions. Secondly, the capacity to reason and structure moral judgment. Thirdly, the priority assigned to moral issues relative to other issues, such as personal considerations. Finally, the way in which moral character influences persistence and resolution in following a moral goal (Rest, 1984). The model of Rest's Four Component Framework consisted of Moral Sensitivity, Moral Judgement, Moral Motivation and Moral Character (Rest, Narvaez, Bebeau, & Thoma, 1999). The four components are outlined as follows in Table 2.2:

Table 2.2 <i>Rest's Four Component Model of Moral Development</i>	
Moral Judgement	Judging which of the available actions is most moral. This component emphasises the selection process of choosing one action over another. This skill is concerned with thinking through recognised moral challenges and determining a preferred course of action. Moral Judgement is not synonymous with matching a recognised challenge with a rule or theory that defines the best solution, rather; levels of ethical maturity are suggested, and the basing of proposed action in any theoretical grounding at the

	<p>higher levels is judged to represent a higher stage of moral development than grounding at a lower level. A higher level of ethical development is considered to exist when more mature systems of reasoning are used as justifications for actions, even when engaging in the same action that could be justified by lower reasons. In Rest's model, the lowest level is "preconventional" thinking, where the impact on the actor takes prominence. The second level is called "conventional" moral reasoning, where the operational ethical structure involves internalisation of group norms. The highest level is titled "postconventional" reasoning, where abstract ethical principles are the grounding. In Rest's theory a single given ethical challenge can be analysed at any of the three levels. Evidence shows that individuals progress through the three levels as they mature, and that this progression is subject to the influence of education and ethics education programs (Rest & Narvaez, 1994; Rest, Narvaez, Bebeau, & Thoma, 1999).</p>
Moral Sensitivity	<p>Interpreting the situation as moral. Moral Sensitivity involves recognising that moral issues exist within a situation. Such recognition requires the skills of identifying when a moral response is appropriate, being aware of how behaviour affects others, identifying possible courses of action, and determining the consequences of each potential strategy. Empathy and perspective skills are essential to identifying and exploring moral issues. Understanding how others might feel or react can alert us to the potential negative effects of our choices and makes it easier to predict the likely outcomes of various options.</p> <p>Individuals who fail to recognise a moral challenge will have</p>

	difficulty behaving morally, regardless of his skills on the other three components.
Moral Character	Being able to construct and implement actions that service the moral choice. This component stresses the development of the processes and skills necessary for effective moral action. Rest and Narvaez (1994) define this component as the character elements of “ego strength, perseverance, backbone, toughness, strength of conviction, and courage” (p. 24).
Moral Motivation	Prioritising the moral over other significant concerns and personal values. This component emphasises the choice made to be moral over other possible behaviours that are valid and significant, and is concerned with the extent to which the inclination for moral behaviour is an intrinsic personal quality. Duckett and Ryden (1999) considered this construct to be the process of prioritising ethical values.

2.2.1 The Relationship Between Moral Development and Ethical

Understanding

Rest’s Four Component Framework illustrates the four stages an individual experiences in making an ethical decision. Stages 1 and 2 are determined by the individual’s ethical development, and represent his ethical reasoning. However, ethical action or behaviour is reflected by Stages 3 and 4. Depending on the moral issue in question, all components may either be employed in a sequential process, or individual components may be engaged more comprehensively than others in an iterative process. Bebeau (2002) considered each of the four components as a

contributor to moral behaviour and suggested that the Four Component Framework described the cognitive processes individuals use in ethical decision-making and depicted how an individual first identifies an ethical dilemma through to his intention and finally courage to behave ethically. This process is summarised by Bebeau (2002) as follows: (1) Ethical sensitivity- the individual must be able to identify a moral dilemma; (2) Ethical judgement - the individual forms a judgment on the ideal solution to the moral dilemma; (3) Ethical intention - the individual's intention to comply or not comply with the ideal solution is decided; and (4) Ethical courage - the individual develops the courage to follow through with his moral action. Although the four components in Rest's model are commonly titled Moral Sensitivity, Moral Judgement, Moral Motivation and Moral Character, there are variances within the literature on the labelling of each component. Terms such as Moral Reasoning or Ethical Development (Rest & Narvaez, 1994), Moral Identity or Moral Courage (Rest, Narvaez, Bebeau & Thoma, 1999) and Professional Identity or Moral Commitment are also used (Bebeau, 2009). The flexible application of labels reflects the pragmatic rather than theoretical nature of the components and the individual instruments employed to explore various aspects of each component in different contexts.

2.2.2 Multidimensional Nature of Ethical Understanding

Existing theory and research have contributed to greater understandings about the multidimensional nature of moral development, knowledge, and

learning, and their relation to the provision of moral education. Stage theories of development have yielded to theories that recognise the multifaceted nature of human development and learning. Howard Gardner and Robert Sternberg have gained prominence with their notions of “multiple intelligences” (Gardner, 1993, 1999) and the “triarchic nature of the mind” (Sternberg, 1985, 1996). Gardner’s (1993) work identified several distinct forms of intelligence, including “inter-personal” (social skills) and “intra-personal” (insight, metacognition) intelligence, both of which are central aspects of character education (p. 20). Sternberg’s (1985) work introduced several information processing sub-processes that interact to determine behaviour, particularly the ability to adapt to and shape the present environment.

More recently, developments in neuroscience have provided new insights into the foundations of cognitive and affective processes associated with children’s moral judgments and behaviour. Findings that identify the underlying neurocognitive mechanisms involved in processing and evaluating moral and conventional violations in adolescence (Lahat, Helwig, & Zelazo, 2013), and reveal that intentional moral judgments entail an integrated neural response involving both emotion and cognition (Decety & Howard, 2014), lend further support to the multidimensional nature of ethical understanding.

As new understandings of the multidimensional nature of ethical understanding have developed, and will continue to develop into the future, it is

important to consider how such understandings are reflected in the aims and pedagogy of educational strategies designed to foster the development of ethical understanding in children.

2.3 Moral Education

The modern origins of moral education can be traced to the works of educational philosophers such as John Dewey and Alfred North Whitehead, and psychologist E. L. Thorndike. In the early part of the 20th Century, both Dewey and Whitehead argued that an approach to education must address the development of the whole person (Dewey, 1916) and be purposeful in design (Whitehead, 1929). Moral education is often viewed as having a particular emphasis on education in civic and moral values and is commonly associated with related terms in the literature including: spiritual, moral, social, and cultural development (Meakin, 1988); character education (Lickona, 1991, 1996); education in virtues (Carr & Steutal, 1999); the development of attitudes and personal qualities (Halstead & Taylor, 2000); and values education, which Carr (1999) suggested was itself a term intended as a “catch-all for moral, social and personal, civic and spiritual education” (p. 147). Approaches to moral education can be broadly divided into three categories: traditionalist, humanist, and integrationist. The traditionalist approach is focused on the development of virtue or moral habits, whereas the humanist approach is concentrated on experiential influences and the role of relationships in the development of character. In contrast

to these divergent models, the integrationist approach combines both traditional virtue ethics principals and moral reasoning practices, within a caring environment as a comprehensive model of moral education (Narvaez, 2006). Of the numerous approaches to moral education available, four individual models hold particular relevance to the context of this current study. The four models are Values Clarification, Values Analysis, Kohlberg's Just Community Approach, and Character Education. Although differences are apparent between each of the models, they all share the common belief that moral development is determined to some extent by cognitive development and is influenced by social contexts and learning environments.

2.3.1 Values Clarification Model

Values clarification techniques are credited to the work of Rath, Harmin, and Simon who published the book *Values and Teaching* in 1966. Following the publication of the book, there was a substantial growth in moral education and in values clarification in particular. Purpel and Ryan (1976) described four distinct factors that contributed to the growth and popularity of the values clarification approach. The four factors recognise that the values clarification approach consists of a succession of related methods that are easily accessible to educators, that teachers have the opportunity to consider very important issues openly and honestly, the approach supports a non-didactic teaching style, and the effectiveness of the approach to engage students in issues that are relevant to them (p. 73). Rath

et al., (1966) claimed that children are subject to a wide range of conflicting values, this may result in children experiencing confusion of personal values. Those children who experience values confusion “...are often identifiable by idiosyncratic behavior patterns—inconsistency, drift, over-conformity, over-dissension, and chronic posing; and frequently, underachievement” (p. 8). Values clarification is claimed to encourage students to think for themselves about values confusion in an effort to enable them to be more self-directed and reflective in understanding life’s confusions. The intention of this reflection process is to achieve values clarity. Harmin (1979) noted that Raths’ view was built on Dewey’s suggestions that reflection on life experiences would serve integration of sense, need, impulse, and action. Values clarification strategies are intended to assist the student in the reflection process, and help clarify confusions, in order that they “might more harmoniously direct their energies and manage their lives” (Harmin, 1979, p. 23). Values clarification advocates hold that if this assistance is provided, then instead of values confusion and idiosyncratic behaviour patterns such as apathy or disengagement, “...behavior patterns suggesting more harmony within, such as enthusiasm, persistence and self-direction” will emerge (Harmin, 1979, p. 23). The following statement provides a summary of the aim of values clarification:

Values clarification is merely meant to do what it is meant to do,
which is to assist people to think through life’s confusions so they

might be less confused and so they might learn skills of self-direction that will serve them in the future. (Harmin, 1979, p. 26)

The values clarification approach to moral education does not focus on the transmission of any particular set of values as it is more concerned with the process of valuing rather than the nature of values themselves. Proponents of this approach support the belief that there are no absolute values but that personal values are developed or identified through the values clarification procedure. Value is defined as that which results only when each of the following three processes and seven criteria have been satisfied:

Choosing: (1) freely

(2) from alternatives

(3) after thoughtful consideration of the consequences of each alternative

Prizing: (4) cherishing, being happy with the choice

(5) willing to affirm the choice publicly

Acting: (6) doing something with the choice

(7) repeatedly, in some pattern of life

(Raths et al., 1966, p. 30)

One of the means used to support values clarification is the manner in which educators respond to students. The strategy referred to as the 'clarification response' is described as:

...a way of responding to a student that results in his considering what he has chosen, what he prizes, and/or what he is doing. It stimulates him to clarify his thinking and behavior and thus to clarify his values; it encourages him to think about them. (Raths, et al., 1966, p. 1)

The clarifying response is designed to raise questions in the student's mind, to encourage the student to clarify his thinking and to examine his behaviour in order to determine consistency with his ideas. The approach promoted by the values clarification model challenges students to consider and discuss their own values and those of other people in a context of reflection and inquiry. The model emphasises the personal nature of moral development and involves a process that is suitable for teaching within the context of a classroom. At the time that the model was introduced the process was not entirely novel, as many parents and teachers have sought to encourage young people to consider and develop values for themselves. However, through the values clarification model, Raths, Harmin, and Simon (1978) systemised the approach and formulated strategies that related to the process of valuing a set of principles. The key difference to previous approaches is that the teacher is required to remain unobtrusive, permitting the students to express themselves openly without restrictions; no attempt is made to moralise, criticise, or to suggest values. The explicit aims of the values clarification model are to assist people to "become more purposeful and productive by sharpening their critical thinking skills and to make them less

vulnerable to bandwagon tactics” (Irwin, 1988, p. 10). According to Irwin (1988), after completing values clarification experiences, students demonstrated improved classroom behaviour and reported more positive attitudes towards themselves. These findings contradicted earlier work by Fraenkel (1980), who reported that values clarification appeared to have little, if any effect on students’ behaviour.

In addition to the inconclusive outcomes for students, the values clarification model has been criticised on a number of points. In particular, Kirschenbaum (1995) claimed that without the diligent guidance of a skilled educator the process might result in the development of undesirable values, and that during the affirmation process (prizing), vulnerable students could be susceptible to extrinsic pressure to conform to socially driven values.

2.3.2 The Values Analysis Model

The values analysis model has several elements common to the values clarification model; however, there is also a significant difference because values analysis typically involves consideration of social issues that include numerous people and perspectives to encourage students to examine other people’s values in addition to their own (Hof & Dwyer, 1982). The values analysis model is grounded in argumentation theory and formal debate practice as students are presented with controversial issues and are encouraged to analyse the topic by engaging in discourse with others to achieve resolution by assuming an oppositional affirmative or negative approach (Kirschenbaum, 2000). In its

original form, values analysis involves following John Dewey's step-wise reflective thinking strategy for problem solution:

- 1) That the pupil have a genuine situation of experience and that there be continuous activity in which he is interested for its own sake;
- 2) That a genuine problem develops within this situation as a stimulus to thought;
- 3) That he (the learner) possess the information and make the observations needed to deal with it;
- 4) That suggested solutions occur to him, which he shall be responsible for developing in an orderly way; and
- 5) That he have opportunity and occasion to test his ideas by application, to make his meaning clear and to discover for himself his validity. (Dewey, 1916, p. 192)

This seminal description illustrates the enduring value of the strategy as it continues to form the basis of ethical decision-making frameworks 100 years later.

An instructional model of the values analysis process in the context of a classroom was presented by Metcalf (1971). It involved the following steps: (1) Identify and clarify the value question; (2) Assemble purported facts; (3) Assess the truth of purported facts; (4) Clarify the relevance of facts; (5) Arrive at a tentative value decision; and (6) Test the value principle implied in the decision (pp. 29-55). Applying the format of values analysis to issues taken from current

affairs and environmental, social, economic or political concerns is considered likely to provide students with opportunities for reflective thought, critical thinking, refutation, and adaptation.

2.3.3 Kohlberg's Just Community Approach

Earlier approaches to moral education sought to encourage students to develop to the next stage of moral reasoning through exposure to contradiction inherent to their present level of moral reasoning. A commonly applied strategy was to present a scenario of moral dilemmas and require students to decide and explain what course of action the character portrayed in the dilemma should take. Students were then encouraged to examine and discuss the contradictions present in any course of action not based on principles of justice or fairness. While Kohlberg acknowledged the significance and value of such moral dilemma discussions, he believed that in addition to individual reflection, it was vital that moral education provide opportunities for students to function as moral agents within a community. Building on his cognitive developmental theory, Kohlberg and his colleagues developed the Just Community Approach to moral development (Power et al., 1989). The program utilised age-appropriate discussions of moral dilemmas, democratic rule-making, and the creation of a community context within which students and teachers could act on moral decisions (Hersh, Paolitto, & Reimer, 1979). Kohlberg endorsed democratic governance as the basis of the Just Community Approach whereby students learnt to democratically share

responsibility for decision-making (Rich & DeVitis, 1994). The aim of the approach is to enhance students' moral development through involvement in a truly democratic community within which members participate equally in consensual decision-making. The central practice of the approach within schools is a community meeting in which issues related to life and discipline are discussed and democratically decided, with an equal value attributed to the views of all students and teachers. A fundamental goal of the community meetings is to establish shared norms that support equality for all members of the school community. The approach places an emphasis on affecting student actions in addition to reasoning. Although this approach stems from the cognitive-developmental view that discussion of moral dilemmas stimulates moral development, it is further supposed that by placing the responsibility of determining and enforcing rules on students themselves, they will regard pro-social behaviour more seriously.

2.3.4 Character Education Model

Historically, character education was encompassed in religious tenets, but as public education became more widespread since the turn of the 20th century, these religious beliefs became more associated with morals and often enforced rules in the school setting, such as obeying authority, not swearing, being clean, reading the bible, and being physically fit (Bulach & Butlek, 2002). In a broad sense, character education refers to “almost anything that schools might try to provide

outside of academics, especially when the purpose is to help children to become good people” (Robinson, Jones, & Hayes, 2000, p. 21). The American School Counsellor Association state that the purpose of character education is to “assist students in becoming positive and self-directed in their lives and education and in striving toward future goals” (Vess & Halbour, 2003, p. 1). At the core of character education is a belief that there are specific values or virtues such as honesty, kindness, generosity, courage, freedom, equality, and respect that should be a part of education for all students (McBrien & Brandt, 1997). Although the selection of specific values or virtues is not universal and is dependent on the context, it is considered that character is comprised of interrelated elements.

Lickona (1991) described the interrelationship between the elements of character:

Character so conceived has three interrelated parts: moral knowing, moral feeling, and moral behaviour, *Good character consists of knowing the good, desiring the good, and doing the good* – habits of the mind, habits of the heart, and habits of the action. All three are necessary for leading a moral life; all three make up moral maturity. (p. 51)

In agreement with the existence of interrelated elements, psychologist Gordon Vessels (1998) noted that “Character education combines direct teaching and community-building strategies in various ways to promote personal and social

integrity and the development of moral virtues, moral reasoning abilities, and other personal assets and qualities that make this possible” (p. 4).

In the context of character education it is understandable that the emphasis be placed on the positive aspects of character categorised as virtues or values, however; it must also be recognised that character includes negative elements such as dishonesty or greed, and these too must explicitly be referred to if students are to identify them. Ryan and Bohlin (1999) acknowledged this by explaining that “Character, then, is very simply the sum of our intellectual and moral habits. That is, character is the composite of our good habits or virtues, and our bad habits, or vices, the habits that make us the kind of person we are” (p. 9). Interestingly, it is through the recognition of both positive and negative elements of character that criticism of character education has emerged. Schools are moral environments within which the moral climate presents behaviours and actions, the consideration of social and moral issues, and concerns that are observed and experienced by students. As such, educators act as moral role models whose actions and words, or character, are witnessed and scrutinised by students. Together, the moral environment and teacher modelling have the potential to affect the character development of students. Lasley (1997) argued that educational environments, through the actions and behaviours of teachers, actually modelled character that was contradictory to that promoted by the aims of character education. For example, the aim for students’ to behave cooperatively was challenged by

assessment strategies that encouraged students to work independently and competitively; the aim to foster respect of others was not reflected in instances of preferential treatment given to individual students; and the value assigned to critical thinking was diminished by the requirement for students to conform. Further criticism of character education based on the inadequacy of the educational environment and of teachers as role models, was offered by Nash (1997), who questioned the ability of teachers within the limitations of the educational environment to provide adequate character education relevant to a culturally diverse contemporary society.

2.3.5 Selection of a Framework for Moral Education

From the research reviewed thus far, it is apparent that there is no single universally accepted and proven framework for values-based education in schools. There are also opposing opinions as to the way in which moral education ought to be implemented into curriculum. One approach recommends the integration of moral education into other disciplines (Howard, Berkowitz, & Schaeffer, 2004), another promotes the explicit teaching of moral concepts in all learning areas across every year level (Nielsen, 2005; Tudball, 2007). Supporters of an interdisciplinary approach argue that integration assists students to understand the relevance of ethical concepts to all aspects of life (Katzner & Nieman, 2006). The following section focuses on approaches to moral education in the Australian context.

2.4 Moral Education in the Australian Context

2.4.1 The Evolution of Moral Education in Australian Schools

Recently in Australia, the debate around the role of values in education has focused specifically on the notion of ‘values education’. There are different terms used for values education in the literature, including; moral education, character education, personal and social education, citizenship education, civic education and religious education. Although diversity exists in the naming of morals and moral education in Australia, a growing sense of unity exists concerning the need for its incorporation into schools and curricula. In recent times, there has been concern that core values have been lost from the Australian community. Typically, from the Australian perspective, Mullins (1999) argued that although schools have always maintained responsibility to help students develop values, that over the past century and particularly over the previous 30 or 40 years a “commitment to the importance of inculcating virtue to build character has been set aside” (p. 18). In 1997, Judge Fred McGuire, the president of the Children’s Court of Queensland, expressed concern regarding “a widely accepted view that we as a nation have abandoned many of our traditional values, and are living off our moral capital” (p. 4). It was also suggested that there was a link between a lack of values held by children and an increase in family relationship issues and youth crime (McGuire, 1997), Australia’s high youth suicide rate (Pascoe, 1996), and a decline in respect for those in authority (Mackay, 1999). In response to these concerns, McGuire

(1997) recommended that “virtues like honesty, faith, compassion, loyalty, self-discipline, friendship, courage, perseverance, and work should be inculcated in children from an early age in the home, in the community and in the school” (p. 5).

Although each of the different states and territories of Australia currently has a unique education system and different education acts developed by state parliaments, there was a notable uniformity across these systems in the design of policy documents and curriculum development concerning moral education leading up to the 21st century (Lovat & Schofield, 1998). In the 1980s, the course of moral education curriculum was influenced by documents that included:

Learning and Living (Education Department of South Australia, 1982); *Approaches to Values and Attitudes* (Education Department of South Australia, 1987); and *Effective Participation in Society* (Ministry of Education, 1987). These documents were followed by the *National Curriculum* (Australian Education Council, 1989) which attracted criticism due to the overemphasis on skill-based outcomes at the expense of core value outcomes. In response to the criticism, a project carried out in the Western Australia non-government sector resulted in the production of the *Agreed Minimum Values Charter* (National Professional Development Program, 1995). Meanwhile, a review of the Queensland school curriculum in 1994 resulted in a report that proposed a provisional *Values Charter for State Schools*, and it was recommended that individual schools develop further charters as subsets of that charter (Hill, 1994).

In 1995, State and Territory uniformity was advanced by the introduction of the Civics and Citizenship Education Program; a program developed along guidelines recommended by the Civics Expert Group (1994). Lovat and Schofield (1998) pointed out however, that while the Civics and Citizenship Education Program assumed that values could be taught within the school context, what was not addressed in the document was how such teaching could be realised, or how its effectiveness could be evaluated. In response to this, the authors conducted a study with the aim of identifying whether a direct curriculum intervention could influence children's stated values. The study involved 1048 students from years 5 and 6 across 15 primary schools, randomly assigned to a control group ($n = 469$) and an intervention group ($n = 579$). The intervention was based on the framework for values education used in New South Wales primary schools, *The Values We Teach* (1991), which classified values according to three categories; values relating to education, values focused on self and others, and civic responsibilities. The findings of the study indicated that a direct, values-focused curriculum intervention produced significant positive changes in students' attitudes, that the success of the intervention was dependent on the perceived relevance to the school environment, and that gender differences were notable with females achieving higher baseline scores than males.

More recently, the uniformity of moral education policy has been further cemented as a result of the implementation of the Australian Curriculum.

However, despite the uniformity of policies describing content, technique, and measurable outcomes, the quality of moral education provided continues to be influenced by external factors such as pedagogy and teacher quality (Lovat et al, 2011).

2.4.2 Towards a Broader Definition of Values Education

The beginning of the 21st century saw a growing literature concerning values education in Australian schools, some reflecting programs in public schools (e.g., Cawsey, 2002; Lovat & Schofield, 1998; Lovat et al., 2002) and others in independent or religious schools (e.g., Newell, & Rimes, 2002; Tarlinton & O'Shea, 2002). Almost overwhelmingly the researchers called for the need to maintain, or to reintroduce the teaching of values in Australian schools; however, until recently the emphasis has been on school curriculum provisions with little attention given to identifying how abstract concepts, such as compassion and loyalty are being internalised into student thinking or behaviour. Between 2003 and 2010 the Australian Government funded a national values education initiative (DEEWR, 2012) and interest in values education in Australian primary and secondary schools was reignited after the release of the *National Framework for Values Education in Australian Schools* in 2005 (Department of Education Science and Training [DEST], 2005). Within this framework, the definition of Values Education was agreed to be “any explicit and/or implicit school-based activity which promotes student understanding and knowledge of values, and which

develops the skills and dispositions of students so they can enact particular values as individuals and as members of the wider community” (DEST, 2005, p. 8). The renewed interest in values education was supported by three stages of funding, which stimulated school-based research projects enabling a large sample of schools to report on successful whole-school approaches to values education and to identify effective processes that contribute to best practice in values education. The first report on findings from the school-based projects, *Implementing the National Framework for Values Education in Australian* (DEST, 2006), suggested tentative principles of good practice for values education. These principles recommended that a whole school community agreement about guiding values should form the basis of a school-wide approach to values education that is integrated across all learning areas. Further, values development must be nurtured through positive relationships between educators and students and be explicitly articulated, taught and modelled by the whole school community. In addition to these principles, a commitment to leadership and professional learning to develop values education as a core part of schooling was also recommended (pp. 2-4). The second report on findings from the school-based projects, *At the Heart of What We Do: Values Education at the Centre of Schooling* (Department of Education, Employment and Workplace Relations [DEEWR], 2008) used data collected from schools to devise 10 principles of good practice in values education:

- Establish and consistently use a common and shared values language

- across the school;
- Use pedagogies that are values-focused and student-centred within all curriculums;
 - Develop values education as an integrated curriculum concept, rather than as a program, event or an addition to the curriculum;
 - Explicitly teach values so students know what the values mean and how the values are lived;
 - Implicitly model values and explicitly foster the modelling of values;
 - Develop relevant and engaging values approaches connected to local and global contexts and which offer real opportunity for student agency;
 - Use values education to consciously foster intercultural understanding, social cohesion and social inclusion;
 - Provide teachers with informed, sustained and targeted professional learning and foster their professional collaborations;
 - Encourage teachers to take risks in their approaches to values education;
 - and
 - Gather and monitor data for continuous improvement in values education.

(pp. 9-12)

The final report on these three stages of funding to schools, *Giving Voice to the Impacts of Values Education* (DEEWR, 2008), found that values education resulted in five recognisable impacts on students' learning; these are "values

consciousness, wellbeing, agency, connectedness, and transformation” (p. 5). The combined outcomes of the multiple projects within the National Values Education Initiative delivered a solid foundation for the inclusion of values education within the construction of the Australian Curriculum.

2.4.3 Ethical Understanding in the Current Context

The development of the Australian Curriculum continues to be guided by the *Melbourne Declaration on Educational Goals for Young Australians* which was adopted by the Ministerial Council on Education Employment Training and Youth Affairs (MCEETYA) in 2008. The *Melbourne Declaration* “emphasises the importance of knowledge, skills and understandings of learning areas, general capabilities and cross-curriculum priorities as the basis for a curriculum designed to support 21st century learning” (ACARA, 2012a, p. 4). Within the *Melbourne Declaration*, Australia is described as a nation that values “the central role of education in building a democratic, equitable and just society – one that is prosperous, cohesive, and culturally diverse ...” and recommends that “education equips young people with the knowledge, understanding, skills and values to face the challenges of this era” (p. 3). The values education focus is explicit throughout the *Melbourne Declaration*; this is evident within the introduction which states that “Schools play a vital role in promoting the intellectual, physical, social, emotional, moral, spiritual and aesthetic development, and wellbeing of young Australians” (p. 3). The document defines several aims of education that are

pertinent to values education, in particular; the goals for young Australians to be “confident and creative individuals” and “active and informed citizens” reinforce the role of education in supporting the development of students who:

- Develop personal values and attributes such as honesty, resilience, empathy and respect for others;
- Have the knowledge, skills, understanding and values to establish and maintain healthy and satisfying lives;
- Act with moral and ethical integrity;
- Are committed to national values of democracy, equity and justice, and participate in Australia's civic life; and
- Work for the common good, in particular sustaining and improving natural and social environments. (MCEETYA, 2008, p. 9)

The Australian Curriculum was first implemented in 2010, with the initial version consisting of four Learning Areas (English, Mathematics, Science, History) and seven General Capabilities (Literacy, Numeracy, Information and Communication Technology, Creative and Critical Thinking, Ethical Behaviour, Intercultural Understanding, Personal and Social Competence). The General Capabilities were intended to “encompass the knowledge, skills, behaviours and dispositions that, together with curriculum content in each learning area and the cross-curriculum priorities, will assist students to live and work successfully in the twenty-first century” (ACARA, 2010b, para. 1). At that time, the General

Capability that most closely identified as contributing to values education was titled *Ethical Behaviour*, the introduction for which was:

Ethical behaviour involves students in building a strong personal and socially oriented ethical outlook that helps them to manage context, conflict and uncertainty, and to develop an awareness of the influence that their values and behaviour have on others. Building capability in learning to behave ethically throughout all stages of schooling will assist students to engage with the more complex issues that they are likely to encounter in the future and to navigate a world of competing values, rights, interests and norms (ACARA, 2010a, p. 1).

In January 2012, the Australian Curriculum Version 3.0 was released. This version featured several revisions to the General Capabilities materials adapted in response to national consultation and feedback. Although the scope of the ethical behaviour capability was not altered significantly, it was reorganised and the text was revised accordingly. The Ethical Behaviour learning continuum now comprised of three interrelated organising elements; “Understanding ethical concepts and issues”, “Reflecting on personal ethics in experiences and decision making”, and “Exploring values, rights and ethical principles” (ACARA, 2015b, version 3.0, para 2). Later in 2012, a consultation process carried out with teachers from a sample of schools resulted in further revision of the General Capabilities learning continuum. The revisions included amending the title of the Ethical

Behaviour Capability to that of “Ethical Understanding” and reframing the organising elements as “Understanding ethical concepts and issues; Reasoning in decision making and actions; and Exploring values, rights and responsibilities” (ACARA, 2013, p. 1). Although the changes in response to the consultation feedback may appear minor, they indicate a significant shift towards an emphasis on personal responsibility for ethical choices, ethical development, and ethical reasoning skills.

The inclusion of the General Capabilities within the Australian Curriculum is an indication of a repositioning of values education in the school curriculum. The integration of a values perspective into all curriculum areas situates values as an essential and relevant aspect of schooling, reflecting the core principles established in the findings of the Values Education Good Practice Schools Project Report, *At the Heart of What We Do: Values Education at the Centre of Schooling*, which stated that:

Good practice in values education requires schools to see values education as a whole curriculum concept that informs all teaching and learning across the school. Values education is not a discrete program or part of an implicit hidden curriculum; it is a central principle underpinning the school curriculum offerings, the curriculum design, pedagogy, content and assessment (DEEWR, 2008, p. 10).

2.5 Holistic Education and Values-based Pedagogy

The reviewed examples of research initiatives relating to values education processes in schools can be seen as contributing to what Lovat and Clement (2008) described as a “worldwide resurgence in values education” (p. 273). The nature of the recommendations indicated a move towards a more holistic approach to education. The *Melbourne Declaration* endorses a holistic approach by declaring that “schools play a vital role in promoting the intellectual, physical, social, emotional, moral, spiritual and aesthetic development and wellbeing of young Australians” (MCEETYA, 2008, p. 4). The document is comprehensive in stipulating how the approach would be applied to the curriculum by stating that “The curriculum will enable students to develop knowledge in the disciplines of english, mathematics, science, languages, humanities and the arts; to understand the spiritual, moral and aesthetic dimensions of life; and open up new ways of thinking” (p. 13). The *Melbourne Declaration*, the *National Framework for Values Education*, and the Australian Curriculum affirm the message that effective schooling requires an environment that encourages, supports, and nurtures the holistic development of its students. Although the endorsement for a holistic approach to education is clear, Lovat, Dally, Clement, and Toomey (2011) pointed out that the “challenge remains one of finding the practical structures and pedagogies that facilitate such an ambience” (p. 33).

The revitalisation of interest in values education has been described as significant because it signals that the connections between educational activities and systems, and implicit conceptions of personal wellbeing are now recognised (Pring, 2010). Research relating to the connections between holistic education, values-based pedagogy, and student wellbeing is increasing (e.g., Arthur, 2010; Lovat & Toomey, 2009; Lovat et al., 2011; Lovat, Toomey, & Clement, 2010; Nucci & Narvaez, 2008). Many of these studies include evidence derived from projects originating from the Australian Values Education Program, which identified the developing research links between values education and good practice, and continued on to conduct a range of research and practice projects from 2005 to 2010. The three most significant of these projects were: the “Values Education Good Practice Schools Project” [Good Practice Schools Project] (DEST, 2006; DEEWR, 2008); the “Project to Test and Measure the Impact of Values Education on Student Effects and School Ambience” [Testing and Measuring] (Lovat, Toomey, Dally, & Clement, 2009); and the “Values in Action Schools Project” [Values in Action] (DEEWR, 2010).

Within the two stages of the Good Practice Schools Project, over 300 schools engaged in a range of approaches to values education guided by the core principles articulated in the *National Framework for Values Education in Australian Schools*. Stage 1 of the project found that “by creating an environment where these values were constantly shaping classroom activity, student learning

was improving, teachers and students were happier, and school was calmer” (DEST, 2006, p. 120). The findings, which demonstrated positive effects across a range of measures, including the learning environment and improved academic engagement, suggest that sound values-based pedagogy contributes to the realisation of holistic learning. The Executive Summary of the report concluded that values-based pedagogy has the potential to impact positively on the educational environment of a school, resulting in a number of features, including strengthened teacher-student relationships, positive classroom climate, improved student attitudes and behaviour, increased student knowledge and understanding, and student achievement (DEST, 2006).

The relationship between values-based pedagogy and student achievement was supported by the work of Benninga, Berkowitz, Kuehn, and Smith (2006), who identified a correlation between high quality values development and improved academic achievement. Osterman (2010) offered further evidence of these joint effects in showing that teachers who provide quality content in the context of effective pedagogy in addition to establishing positive, values-rich relationships with students are more likely to influence academic effect in students. The Stage 2 Report (DEEWR, 2008) identified stronger associations among the implementation of values-based pedagogy and both student behaviour and performance. To investigate these effects, the Testing and Measuring project (Lovat et al., 2009) used a mixed methods research approach to measure a range of

factors identified in previous research as contributing to student motivation and academic engagement, including student motivation, student perceptions of the classroom environment, teacher and student relationships, and emotional influences (e.g., Ainley, 2006; Brock, Nishida, Chiong, Grimm, & Rimm-Kaufman, 2008; Davis, 2006; Ryan, 2007). The Testing and Measuring project report concluded that:

There was substantial quantitative and qualitative evidence suggesting that there were observable and measurable improvements in students' academic diligence, including increased attentiveness, a greater capacity to work independently as well as more cooperatively, greater care and effort being invested in schoolwork and students assuming more responsibility for their own learning as well as classroom 'chores'. (Lovat et al., 2009, p. 6)

The Values in Action project (DEEWR, 2010) focused on schools with an existing integrated values-based pedagogy. The report concluded that “a range of evidence supports the impact of values education on improved student wellbeing, most especially the voices of the students themselves” (p. 6). Such findings suggest that educational environments that are values-rich and include explicit values discourse are able to facilitate aspects of holistic education as described within the *Melbourne Declaration* and the Australian Curriculum.

2.6 An Integrative Framework for Ethical Education

A framework that attempts to bring together all the elements of ethical character development for educators, parents, and community members is the Integrative Ethical Education model described by Narvaez (2006, 2008). This framework proposes five empirically derived elements for ethical character development to be applied throughout early childhood and formal schooling. The elements encompass emotional development, social and educational environment, curriculum and pedagogy, and the development of skills and capabilities. The framework begins by recognising the importance of providing support to caregivers in the nurturing of caring relationships as a foundation for the development of emotional signalling and emotional motivation (Greenspan & Shanker, 2004; Lewis, Amini, & Lannon, 2000; Panksepp, 1998). This early emotional development is regarded as critical for life and school success (Masten, 2003; Watson, 2008). The second element recognises that a caring educational environment stimulates several positive outcomes relating to achievement and pro-social development (e.g., Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Solomon, Watson, & Battistich, 2002) and recommended that in order to positively influence ethical perceptions and behaviour, schools and communities establish an environment and social climate that places value on personal achievement and ethical character. Narvaez and Lapsley (2009) described the next element as the application of a “novice-to-expert pedagogy” in which “intuitions

are developed through imitation of role models and timely and appropriate feedback, immersion in activity with mentor guidance, and the practice of skills and procedures across multiple contexts” (p. 260). Through this pedagogy, children are supported in the development of ethical intuition and ethical capabilities. Skills based on ethical sensitivity, ethical judgement, ethical identity and ethical character are fostered throughout the curriculum and extra-curricular activities, the provision of suitable role models and appropriate environments (p. 260). The next element of this integrative approach concerns ethical character development. The authors suggested that in addition to creating an enriched moral environment and provision of valuable tools and guidance for character formation it is also required that educators guide children in understanding that they themselves are responsible for character development and deciding what type of person they choose to be. The final element recommended the establishment of close connections between schools, families, and communities for the purpose of coordinating support and cultivating an ongoing moral environment. This final element reflects the Developmental Assets theory introduced by Benson (1997) and elaborated on by; Benson, Leffert, Scales, and Blyth (1998); and Benson, Scales, Leffert, and Roehlkepartain (1999) to represent a theoretical construct identifying a range of environmental and interpersonal strengths known to enhance educational and health outcomes for children and adolescents. The Developmental Assets theory ascertains that:

It is a community who establishes and nourishes the individual's moral voice, providing a moral anchor, and offering moral guidance as virtues are cultivated. When the connections among children's life spaces of home, school, and community are strengthened, children are adaptationally advantaged. (Benson, 1997, p. 39)

2.7 Summary of Literature Review Part A

It was noted in the introduction chapter that as education enters a new paradigm of schooling for the 21st century, a paradigm calling for improved academic achievement yet recognising the importance of a holistic approach, attention is directed towards how best to realise such aims. Moral education aims, indeed all educational aims, “like all matters of policy, are contextual, political, normative, dynamic and *contested*” (Harris, 1999, p. 3). The relevance, significance and methods of moral education shaped over time by educational priorities and community expectations, are frequently challenged. A review of the literature highlighted the absence of a clear definition of the aims of education for ethical understanding, both generally and more specifically in the Australian context, and revealed the elements of education for ethics within the documents and policies guiding education in the 21st century. The literature also described historical and current ideas surrounding educational practices for the promotion of cognitive, social, and emotional capabilities relevant to ethical development in children.

This examination of the theories of moral development, and models of moral education highlighted the diversity in approaches for education focused on the development of ethical understanding. Taylor's (1994) survey of values education in 26 countries concluded that although diverse in its descriptions "values education, in its various forms, encourages reflection on choices, exploration of opportunities and commitment to responsibilities, and for the individual in society to develop values preferences and an orientation to guide activities and behaviour" (p. 3). Further, it was revealed that in an Australian context, the term values education is used most commonly to encapsulate:

All forms of explicit and/or implicit school-based activity which promotes student understanding and knowledge of values, and which develops the skills and dispositions of students so they can enact particular values as individuals and as members of the wider community. (DEST, 2005, p. 8)

Additionally, it was highlighted that in the Australian context expressions such as ethics, ethics education, and ethical understanding have taken precedence over the more traditional term of moral education.

In addressing the research objective to identify conclusive aims for an approach to education designed to foster the promotion of ethical understanding, the absence of explicitly stated aims and outcomes within the guiding documents was revealed.

2.7.1 Aims of Education to Foster the Promotion of Ethical

Understanding

Having reviewed the professional, scholarly, and curricular literature, the aims of education for the purpose of fostering the promotion of ethical understanding in the Australian context can be summarised as follows:

1. Promote ethical judgement through the skills of reasoning, decision-making and critical thinking, and a focus on explicit knowledge of ethical concepts and issues including rights and responsibilities of humans, non-humans, and entities.
2. Foster ethical sensitivity through the provision of opportunities to enact and practise perspective taking, empathy, compassion and emotional expression, and to identify an ethical response.
3. Support ethical character through explicit acknowledgment of the value, purpose, and acquisition of recognised virtues, attributes, and dispositions to encourage personal values of honesty, resilience, and integrity; civic values of democracy, equity and fairness; and society values of acceptance and community engagement.
4. Cultivate ethical identity to support individuals in recognising the link between ethical self and ethical action, and to understand their contribution to sustaining and improving natural and social environments, and in maintaining healthy and fulfilling lives.

Having identified these aims, the question remains as to how such aims are to be realised? The purpose of this current project was to explore the extent to which animal-focused educational strategies play a role in the realisation of these aims. Through the examination of theories of moral development and existing research in ethics education, Literature Review Part A provided a context within which the aims of educational approaches to ethical development are situated, and served as a foundation to support the investigation of Research Question 1. In Part B of the Literature Review, an exploration of the aims and approaches of animal-focused educational strategies, and the role of human-animal relationships in the development of ethical understanding is presented.

CHAPTER 3

LITERATURE REVIEW PART B

The Role of Human-Animal Relationships in Children's Development

The first part of this literature review surveyed theories of moral development, examined models of moral education, and presented definitions for the aims of education to foster the promotion of ethical understanding in children. This second part will explore the literature related to current understandings of the role that animals can play in human lives and in the development of ethical understanding through an exploration of the changing role of animals in society with a focus on animal welfare, animal advocacy, animal law, and animal ethics. Part B explicitly addresses research questions 1 and 2 through the critical review of current understandings of human-animal relationships and the examination of prevalent approaches to animal-focused education strategies. Finally, the conclusions drawn from Part A and Part B of the literature review are combined to illustrate the potential contribution of human-animal relationships to the four identified dimensions of ethical understanding.

3.1 The Changing Role of Animals in Society

Society is currently experiencing a significant expansion in social concern, consciousness, and behaviour towards issues relating to animals and the environment. Concepts that emerged in the second half of the 20th century, such

as Land Ethics (Callicot, 1989), Animal Liberation (Singer, 1975), and Deep Ecology (Mathews, 2007), have given rise to a fundamental shift from an anthropocentric perspective towards a more biocentric or ecocentric worldview. This significant change has continued to gain momentum in the 21st century and further indicators of the rise in social concern for animals is evident in the areas of animal welfare, animal advocacy, animal law, and animal ethics.

3.1.1 Animal Welfare

Concern for the welfare and rights of animals gained further momentum in the 1970s at which time, Australian philosopher Peter Singer published *Animal Liberation*, a book that raised the issue of ethics surrounding the treatment and usage of animals (1975, 2009). Since that time, several notable philosophers including Tom Regan and Bernard Rollin have published widely on the moral considerations relating to the use of animals for scientific purposes, cosmetic testing and agricultural production (Regan, 1989; Rollin, 2004, 2006). The use of animals for scientific purposes and cosmetic testing has received considerable attention and recent changes to regulations have seen some improvements in those areas. The intensification of agricultural production systems which present challenges to animal health and well-being, remains a serious concern and there is a demand for scrutiny in terms of ethics and welfare (Rollin, 2004). One outcome of the increasing social concern has been the call for transparency in animal production and management practices. Consumers and individuals seek

information not only on the ecological footprint of produce and products they purchase but also as consumers become aware of and concerned for the practices involved in animal production they are also demanding what could possibly be referred to as the ‘welfare hoofprint’ or ‘welfare pawprint’ of animal products.

Until recently, there has been limited research regarding public opinion relating to animal welfare in Australia and much of the research that has been conducted has been commissioned by specific groups and organisations and is only available as reports rather than being published in the scientific literature. Encouragingly though, this situation has changed. In 2006, a survey was conducted as part of the Australian Animal Welfare Strategy (AAWS) to gain a clearer insight into the level of understanding and relative importance of animal welfare to the Australian public. The main findings show that animal welfare was of high interest with ‘prevention of cruelty’ and ‘humane treatment’ most commonly used to define the term ‘animal welfare’ (Mazur, 2006). In 2014, Voiceless, an institute dedicated to the protection of animals, commissioned the then Humane Research Council (HRC), renamed Faunalytics in 2015, to conduct the first comprehensive and longitudinal survey of animal-related opinions and behaviour in Australia. Surveying 1,000 Australian adults, the survey provided in-depth insights into Australians’ awareness, knowledge, and attitudes towards various animal issues including factory farming, hunting, live export and meat consumption. The research findings revealed that Australians were

overwhelmingly in support of legislation and practices that offer greater protection for animals, and that consumers are averse to the idea of contributing to animal suffering through purchasing or consumption choices. A summary of the major findings include:

Australians generally agree that animals are sentient and that people are obliged to avoid harming them, but they have mixed beliefs about kangaroos and farmed animals....Most Australians consider themselves at least somewhat aware of various animal issues and most also consider the wellbeing of animals to be very important.... Half of Australians think incorporating humane education into schools is very important.... The vast majority of Australians believe that the wellbeing of animals exported overseas for food is important.... Additionally, they are more likely to say that current laws for exported animals are 'inadequate' than to say they are 'adequate'. (Voiceless, 2014, p. 2)

Overall, the survey found that Australians generally have favourable attitudes toward animals, although it is important to note that for many people these attitudes are not necessarily demonstrated in actual behaviour. Additionally, Australians have diverse attitudes regarding different animal species including farmed animals and particularly kangaroos. This contradiction between attitudes and behaviour is indicative of the fact that animals are frequently categorised as

companions, commodities or pests on purely subjective grounds, often determined by social or cultural factors (Gray & Young, 2011; Urbanik, 2012). This concept of categorisation is referred to as Speciesism. First raised as a concept by British psychologist Richard Ryder in 1971 and expanded upon by Singer (1975), speciesism involves the assignment of different values, rights, or special consideration to individuals solely on the basis of species membership. The term became an entry in the Oxford English Dictionary in 1985, defined as: "discrimination against or exploitation of animal species by human beings, based on an assumption of mankind's superiority" (Wise, 2004, p. 26). In 1994 the Oxford Dictionary of Philosophy offered a more comprehensive definition: "By analogy with racism and sexism, the improper stance of refusing respect to the lives, dignity, or needs of animals of other than the human species" (Blackburn, 1994, p. 358). Another indication of changing attitudes to animal welfare is demonstrated by the fact that although there are no national laws applying to animal welfare in Australia, five out of the eight Australian states and territories have revised and converted their respective Prevention of Cruelty to Animals Acts to become Animal Welfare Acts (the exceptions being New South Wales and Victoria).

3.1.2 Animal Advocacy

The level of awareness and concern for animal welfare over the past 10 years is matched by the expansion of Australian and international animal advocacy

groups. Animal advocacy groups in Australia include Animals Australia, RSPCA, Compassion in World Farming, Voiceless, Animal Angels and others. Some groups seek to establish dialogue with industry and government while others focus on providing educational materials and resources. There has been recent growth in significant national and international media coverage of Australian animal welfare issues. In 2004, the America based animal rights group People for the Ethical Treatment of Animals (PETA) demanded that the Australian government prohibit the two practices of live animal export and the mulesing of sheep (PETA, 2004). Similarly, World Animal Protection (WAP) launched a global campaign for higher welfare standards across the food industry (WAP, 2013). Animals Australia leads several campaigns including issues relating to the dairy industry, live export, factory farming and horseracing (Animals Australia, 2014). Social media and technology provide an effective medium for advocacy groups to inform and engage a wider audience than was previously possible, this enables students, teachers and the general public to access a huge range of information and ways to become involved in animal issues. For example, RSPCA World of Animal Welfare (WOAW) provides teaching resources for students on care and compassion to animals. Similarly, Animals Australia Unleashed provides an online forum and resources directed at students and young people, and Voiceless Animal Advocates aims to encourage university students to become involved in animal welfare issues. Other animal advocacy groups are also active in hosting scientific

seminars, as well as providing funding for research, awards and scholarships (e.g. International Fund for Animal Welfare [IFAW], 2015; Voiceless, 2015; WAP, 2013).

3.1.3 Animal Law

The growing social concern and awareness surrounding the exploitation of animals for human benefit naturally draws attention to numerous moral, ethical and legal concerns. Consistent with this awareness is the area of Animal Law, which emerged in the 1980s and has since gained recognition as a distinct legal discipline. In 2007, the president of the Australian Law Reform Commission, Professor David Weisbrot reported that during the Sydney meeting of the Australasian Law Reform Agencies Conference in April 2006, “over 100 institutional law reformers from 32 law reform agencies in 25 Commonwealth countries endeavoured to identify the ‘over the horizon issues’ that would occupy them in the coming decades” - included in the issues was animal welfare and animal rights which were “described by speakers as perhaps the next great social justice movement” (para. 4). The realisation of this prediction was evidenced by the emergence of courses in Animal Law throughout Australia with at least 14 law schools offering courses in animal law in 2014 (Voiceless, 2014). The significance of the growth of animal law is not only the manner in which the law regulates the treatment of animals reflects society’s regard for animals but also that the law shapes our understanding of the place of animals in the world. With the changing

role of animals in society, it is inevitable that their status be questioned and reconsidered. When considering the relevance of animal law courses, White (2007) explained that graduates of such courses:

will go on to become litigators and prosecutors, members of parliament and the judiciary, senior policy-makers within government departments, and senior managers in the private and not-for-profit sectors. In all these spheres there is the potential for a significant contribution to the reform of the status of animals. (para. 16)

White (2007) went on to say that although it is too early to ascertain the extent to which the development of animal law as a distinct discipline might contribute to animal welfare, “at the very least, though, animal law has the potential to sensitise lawyers to the need for a more compassionate ethic and to contribute to an environment of increased legal activism and public debate” (para. 18). To highlight the rate at which animal law is growing the second edition of *Animal Law in Australia: Continuing the dialogue* (Sankoff, White, & Black, 2013) builds upon the significant developments in animal law which have occurred since 2009 and addresses emerging areas of concern relating to animal welfare legislation, policy, codes and guidelines, enactment and monitoring. Further indication of advances in animal law is demonstrated by the establishment of an organisation devoted to the legal representation of animals. The Non-human Rights Project (NhRP) is described as “the only civil rights organization in the

United States working to achieve actual legal rights for members of species other than our own” (NhRP, 2015a, para 1). The Non-human Rights Project group was founded in 2007 by attorney Steven Wise with the purpose of gaining legal rights for change to the common law status of at least some members of species other than humans by removing the legal distinction between human and non-human animals which currently regards animals as ‘things’, which lack the capacity to possess any legal right, and establishing their rights as ‘persons’ who possess such fundamental rights as bodily integrity, bodily liberty, and those “other legal rights to which evolving standards of morality, scientific discovery, and human experience entitle them” (NhRP, 2015a, para 2). The group maintains that cognitively complex species, including chimpanzees, elephants, dolphins, and whales “have deep emotions, understand each other’s minds, live in complicated societies, transmit culture, use sophisticated communication, solve difficult problems, and even mourn the loss of their loved ones” (NhRP, 2015a, para 4), yet in current law they are considered property and are afforded the same rights as such. The group describe this situation as “illogical, unnatural, and unethical” (NhRP, 2015a, para 6). The NhRP and its president, Steven Wise, have filed a number of habeas corpus actions in New York State on behalf of captive chimpanzees. In one such case, Justice Barbara Jaffe, citing the New York Court of Appeals, remarked:

‘Legal personhood’ is not necessarily synonymous with being human ... Rather, the parameters of legal personhood have been and will continue to be discussed and debated by legal theorists, commentators, and courts and will not be focused on semantics or biology, even philosophy, but on the proper allocation of rights under the law, asking, in effect, who counts under our law. (NhRP, 2015b, para. 4)

This example demonstrates current trends in attitudes towards non-human animals and indicates not only a considerable change in the role of animals in society thus far, but that greater changes are likely to occur in the future.

3.1.4 Animal Ethics

Another significant indicator of change is that of the role of veterinarians. The survey conducted by the Australian Animal Welfare Strategy (AAWS) in 2006 reported that 52% of surveyed respondents accessed information on animal welfare from veterinarians (cited in Mazur, p. 6), however; until recently Veterinary Science courses have focused primarily on animal health and production with little emphasis given to animal welfare or ethics. In response to changing society concerns, there is increasing recognition and action being taken to incorporate explicit teaching of welfare and ethics in veterinary undergraduate courses in Australian universities. The Federal Government recently approved a \$378,000 Office for Learning and Teaching (OLT) research grant to produce nationally shared curriculum resources for veterinary undergraduate learning in

animal welfare and ethics. All eight veterinary schools in Australia and New Zealand are involved in the project which is being led by the University of Sydney (James Cook University, 2013). In America, the Association of Veterinarians for Animal Rights (AVAR) joined forces with the Humane Society of the United States (HSUS) to establish the Humane Society Veterinary Medical Association (HSVMA, 2014) which provides a platform for veterinarians to communicate concerns relating to inhumane practices routinely employed in various commercial enterprises, including farming. The Australian College of Veterinary Scientists includes an animal welfare chapter that is growing rapidly and given that future generations of Australian veterinarians will have a greater knowledge and understanding of animal welfare and ethics, it is foreseeable that more will seek careers in these fields.

3.2 Human-Animal Relationships as Indicators of Deficiencies in Ethical

Understanding

The changing role of animals in society is not exclusively positive. Schaefer (2002) recognised that human-animal relationships have similar attributes to those between humans, and as is the case in interpersonal relationships between individuals or family members, human-animal relationships are not always progressive (Gullone, 2011). A preliminary search of the literature indicates that there is more information regarding the negative associations of human-animal interactions than there are positive associations. Negatives include the link

between violence towards animals and violence towards humans, welfare and cruelty issues, and risks or perceived dangers. Of particular relevance to children are the link between animal abuse and domestic violence and the association between children demonstrating cruelty to animals as an indicator of child abuse. The connections between mistreatment of animals and mistreatment of humans are not new; as long ago as 1705 Locke noted that “they who delight in the suffering and destruction of inferior creatures, will not be very compassionate or benign to those of his own kind” (cited in Ascione & Arkow, 1999, p. 197). In 1893, Margaret Marshall Saunders wrote in her novel *Beautiful Joe* that "If he is bad enough to ill-treat his dog, he will ill-treat his wife and children" (1922, p. 35).

The association between animal abuse and domestic violence has received considerable attention over recent decades. Researchers suggest that the participation in animal cruelty or the witnessing of cruelty towards animals may be associated with the development of attitudes that reflect callousness toward the well-being of others, including humans (Ascione, Weber, & Wood, 1997; Gullone, 2011). Psychological studies have consistently shown a link between cruelty to animals and violent behaviour toward humans (Ascione, 2001, 2008). Further, psychologists have established that abusive relationships with animals in the family home are indicative of an abusive home environment for family members and other human occupants (Becker & French, 2004; Henderson, Hensley, & Tallichet, 2011). Over the past 30 years, researchers and professionals in human

services and animal welfare disciplines have established significant connections between cases of animal abuse and instances of violent crime, interpersonal violence and child abuse (National District Attorneys Association, 2014). This extensive research has led to the current recognition that rather than animal abuse being viewed as an isolated incident, the mistreatment of animals is regarded as a reliable predictor of criminal activity and an indicator that children and other family members may also be at risk.

A number of conflicting theories have emerged to explain the positive correlations between animal abuse and interpersonal violence. Regrettably, it is beyond the scope of this study to include a review of each theory; however, a thorough critique of current theories including the graduation, deviance, and masculinities hypotheses can be found in Zilney (2007). Currently, although no causal relationship has been identified between animal abuse and violence, the positive correlation between these activities is referred to as “The Link”. In America, The National Link Coalition (NLC) acts as a collaborative, multi-disciplinary initiative that aims to increase awareness and address public policy, and develop programs and research relating to the correlations between animal abuse and human violence (NLC, 2014). In 2013, the American Humane Association (AHA) released a research summary drawing together the major findings of studies related to the link including violent crime, domestic violence, child abuse and neglect, and empathy deficits.

3.2.1 Violent Crime

Significant research has documented relationships between childhood histories of animal cruelty and patterns of chronic interpersonal aggression (Arkow, 2015; Becker & French, 2004; Kellert & Felthous, 1985; Henderson et al, 2011; Hensley & Tallichet, 2005; Hensley, Tallichet, & Dutkiewicz, 2009; Merz-Perez, Heide, & Silverman, 2001). The research summary provided by the AHA highlights the findings of a number of studies that reveal the prevalence of violent criminal behaviour enacted by conductors of animal abuse. Amongst the findings, it was revealed that a high proportion of animal abusers have criminal records including crimes of violence, property, drugs or disorderly behaviour (Arluke & Lockwood, 1997; Arluke & Madfis, 2013). Schiff, Louw, and Ascione (1999) conducted a study on a population of 117 imprisoned males in South Africa, of the males convicted of violent crimes 63% had inflicted harm on animals in childhood, whereas of the males convicted of a non-violent crime a considerably lower number, 10.5% had previously committed acts of animal cruelty. In another study, a sample of 64 male sexual offenders 48% of those charged with sexual assault had committed animal abuse in childhood or adolescence (Tingle, Barnard, Robbins, Newman, & Hutchinson, 1986). Research aiming to identify risk factors in school shootings in America found that from the nine youths assessed, 50% had histories of animal cruelty (Verlinden, Hersen, & Thomas, 2000). More recently, the possibility that animal abuse may serve as an early warning for school

massacres has been explored by Arluke and Madfis (2013). In an Australian study, the findings showed that animal cruelty offenders committed an average of four separate types of criminal offence and all sexual homicide offenders reported having been cruel to animals (Clarke, 2002). Further, sexual assault, domestic violence and firearms offences feature prominently in animal cruelty offenders' criminal histories with 61.5% of animal abuse offenders having committed an assault; 17% had committed sexual abuse; and 8% had arson convictions. As a result of these findings, animal abuse was found to be a more reliable predictor of sexual assault than were previous convictions for homicide, arson or firearms offenses (Clarke, 2002).

3.2.2 Domestic Violence

Domestic violence occurs in different forms, the Australian Law Reform Commission and New South Wales Law Reform Commission (2010) state that “the most commonly acknowledged forms are physical and sexual violence, threats and intimidation, emotional and social abuse and economic deprivation” (p. 188). From this definition, it is reasonable to accept that animals may be utilised as tools of domestic violence. Ascione and Arkow (1999) suggested that violence “directed at animals is often a coercion device and an early indicator of violence that may escalate in frequency and severity against other victims” (p. xvii). The coercion element was investigated further in a study by Ascione, Weber and Wood (1997), who found that 71% of the female participants who had reported domestic

violence said their partners harmed, killed or threatened pets, and that 75% of these incidents occurred in the presence of the women for the purpose of controlling them. Further control may be applied through the practice of threatening or performing animal abuse in presence of children (Faver & Strand, 2003). A survey by Quinlisk (1999) similarly found that of 72 respondents who had reported domestic violence, 68% also indicated that there was animal abuse or violence to their animals, the majority of these incidents (87%) occurred in the presence of women, and 75% occurred in presence of children. Not only is animal abuse carried out as a form of coercion or emotional abuse, it is also recognised as a predictor of the propensity to commit domestic violence. A history of pet abuse is one of the four most significant indicators of individuals who are at risk of committing domestic violence (Walton-Moss, Manganello, Frye, & Campbell, 2005). McHendrix (2010) describes an American study of fifty facilities for abused women, revealing 85% of women and 63% of children were aware of instances of animal abuse or cruelty in the home. An Australian study by Volant, Johnson, Gullone, and Coleman (2008) revealed that a significant proportion of abuse victims reported that their abuser has previously abused an animal. Animal abuse has been included as a criterion used in the diagnosis of conduct disorder among children and adolescents, which may prove an important factor through which to investigate co-occurrence of interpersonal violence (Volant et al, 2008). Abusers may use animal abuse as a means of controlling their partners or families,

especially when a victim exhibits a strong emotional attachment to his/her pet (Flynn, 2000b, 2009). Where a close bond exists between a pet and an abused partner, harm or threat of harm to the pet can be used to control, intimidate, coerce and silence the victim (Flynn, 2000a, 2009). This form of control brings further concerns; in addition to experiencing trauma as a result of witnessing threats to or abuse of a pet, studies show that many women delay leaving an abusive situation out of concern for their pet's safety and that once they have left the relationship, some victims may return out of concern for their pet (Flynn, 2009). Women seeking refuge at shelters due to violent relationships reported that their pets provided an important source of emotional support and companionship as they dealt with abuse. Many victims of abuse also described forming bonds with companion animals that were similarly victimized (Flynn, 2000a). However, accommodation for families or individuals seeking refuge from domestic violence may not have the capacity to accommodate pets. In addition to causing many women to delay seeking shelter, this causes women who leave their pet behind to risk the welfare of their pet, lose the emotional support provided by their pet, and experience guilt regarding their inability to help their pet (Flynn, 2009). Ascione (2001) suggested that animal abuse and domestic violence share similar characteristics irrespective of the victim species. In both instances, the victims are living, are capable of suffering pain or distress, can display physical and emotional signs of pain or distress and may die as a result of inflicted injuries. In an

Australian study, Gullone et al. (2004) compared the experiences of 104 women who were currently or previously in a violent interpersonal relationship, against a comparison group of women who had never been in a violent interpersonal relationship. Almost half (46%) of those who had experiences of domestic violence reported that their partner had threatened to harm their animals. In contrast, only 6% of the women from the comparison group reported threats of harm to their animals. Over half (53%) of the women who had experienced domestic violence indicated that their partner had intentionally harmed or killed an animal, whereas there were no reports of this within the comparison group. The study concluded that the findings indicated that abusive behaviours towards animals and humans are likely to have the same underlying causes and that the presence of animal abuse within an interpersonal relationship may be an indicator of abusive behaviour towards adults and children. The cyclical effect of animal abuse is also a concern; female victims of domestic violence commonly reported that their children had also hurt or killed animals (Ascione, 2001) and many children who have witnessed the abuse of a pet go on to abuse pets themselves (Ascione, Friedrich, Heath, & Hayashi, 2003; Flynn, 2011).

Developments in the laws governing animal abuse and domestic violence indicate an increasing awareness, or acceptance of the role that animals play in human lives. Presently, laws enacted to protect victims of domestic violence or child abuse and laws related to animal abuse are positioned within separate

sections of the criminal code. Given the recognised link between domestic violence and animal abuse, cross-reporting has been identified as an important measure to address these interrelated forms of violence (Flynn, 2011). This is reflected in changes to the law. At the time of writing, 25 U.S. states have enacted statutes allowing courts to include pets in protective orders (Wisch, 2013), and seven states include acts of animal abuse in the statutory definition of domestic violence (NLC, 2014). In Australia, the federal domestic violence legislation makes no specific reference to abuse of animals in connection with domestic violence; however, five of eight Australian states and territories explicitly include abuse of an animal within the definition of domestic abuse (see Australian Capital Territory Domestic Violence and Protection Orders Act 2008; Western Australia Restraining Orders Act 1997; Northern Territory of Australia Domestic and Family Violence Act 2009; South Australia Intervention Orders (Prevention of Abuse) Act 2009; Victoria Family Violence Protection Act 2008). Further, Queensland empowers the court to remove from an abuser's possession a "thing," defined to include an animal or pet, which has been used or has been threatened to be used in committing an act of domestic violence (Queensland Domestic and Family Violence Protection Act 2012). Similarly, the Northern Territory statute allows a police officer to remove and detain a person in order to prevent harm to an animal, framing the issue as one of preventing damage to property (Northern Territory of Australia Domestic and Family Violence Act 2009).

3.2.3 Empathy

Empathy is recognised as an integral aspect of ethical understanding within both the *Melbourne Declaration* and the *Australian Curriculum*. The goals of the *Melbourne Declaration* aim to foster the development of “personal values and attributes such as honesty, resilience, empathy and respect for others” (MCEETYA, 2008, pp. 8-9). Whereas, the *Australian Curriculum* promotes the processes of reflecting on and interrogating core ethical issues and concepts, including “justice, right and wrong, freedom, truth, identity, empathy, goodness and abuse” within all curriculum areas (ACARA, 2015a, p. 1). When considering the role of human-animal relationships on the development of ethical understanding, it is interesting to explore the possible links between violence towards animals and compromised empathy levels. Research suggests that aggressive acts against animals are an early indicator in children of future psychopathology (Arkow, 1996; Flynn, 2011; Kellert & Felthous, 1985) and that exposure to animal abuse can desensitise children to violence between humans (Ascione, 1992). There is increasing evidence that animal abuse is an indicator of compromised empathy in humans (Ascione, Weber, & Wood, 1997; Lockwood & Hodge, 1986; Thompson & Gullone, 2003). A number of psychological studies have consistently shown a link between cruelty to animals and violent behaviour toward humans (Ascione, 2001, 2010; Becker & French, 2004). Furthermore, empathy has been proposed as a mediating factor in aggression to both humans

and animals with a number of authors suggesting links between deficits in empathy and antisocial behaviours (Cohen & Strayer, 1996). For example, research has shown that empathy lessens the likelihood of aggressive behaviour (Eisenberg, 2000). Likewise, Loudin, Loukas, and Robinson (2003), reported that among college students, the emotional component of empathy is inversely related to aggression and violence. The Kellert and Felthous (1985) study, in addition to confirming a strong correlation between childhood cruelty to animals and future antisocial and aggressive behaviour, stressed the need for further research in the area of childhood animal cruelty. It suggested that the evolution of a more gentle and compassionate relationship in human society might be enhanced by our promotion of a more positive and nurturing ethic between children and animals. In addition, the landmark book, *Child Abuse, Domestic Violence and Animal Abuse: Linking the Circles of Compassion for Prevention and Intervention* (Ascione & Arkow, 1999), argued compellingly that violence-prevention programmes were enhanced by including animal protection personnel and by recognising animal maltreatment as a human welfare issue. The book signified the increased recognition of the interconnectedness of human-animal relationships and encouraged cross-disciplinary training, prevention and intervention based on this knowledge.

3.3 The Role of Animals in Education

The use of animals for the benefit of humans is described by the term Animal Assisted Therapy (AAT). AAT is defined as involving an animal that is under the supervision of a therapist or other human service professional, with the aim to accomplish an identifiable outcome (Geist, 2011). As such, it involves animals in the conducting of specific processes carried out by designated persons (Kruger & Serpell, 2006). Although AAT is most commonly employed to achieve therapeutic goals in the presence of a therapist, it can also be used to achieve set objectives in an educational realm, particularly in relation to behavioural objectives (Friesen, 2010b; Mallon, 1994). AAT has documented benefits in the treatment of a diverse range of behavioural disorders, including cases of Conduct Disorder (CD) and Attention Deficit Hyperactivity Disorder (ADHD) (Geist, 2011). Further, the benefits of the presence of animals in a classroom setting to the development of children's social skills has been attributed to the interaction with an animal increasing a child's awareness of others' feelings (Meadan & Jegatheesan, 2010).

In contrast to AAT, Animal Assisted Activities (AAA) aim to improve the quality of life for a person without having a direct objective (Friesen, 2010b). AAA does not involve structured interactions but rather the intervention can be carried out by any person. It is not goal-oriented nor geared toward any specified

individual treatment plan. In addition, the participants are not required to maintain records or contribute to the individual's health care plan (Kruger & Serpell, 2006).

One example of the increasing acceptance of animals in educational practice is the popularity of animal assisted literacy programs that incorporate the presence of a dog. Investigations into the benefits of animal assisted literacy programs involving dogs in a primary school context have revealed positive findings including enhanced literacy outcomes (Jenkins, 2009), improved social skills (Sorin, Brooks, & Lloyd, 2015), increased reading rate, accuracy and comprehension (Le Roux, Swartz, & Swart, 2014), and greater engagement in learning activities (Bassette & Taber-Doughty, 2013). A program called 'Dogs in Education Assisting with Literacy' (DEAL) involved dogs and their volunteers conducting weekly classroom visits in schools. In a pilot study with three schools, the program resulted in students improving listening, reading and writing skills (Scott, Haseman, & Hammett, 2005). A similar program implemented in Australia was the Delta Society's 'Classroom Canines™' (Delta Society, 2016). This program was developed to assist students with literacy skills and/or social and emotional development through focused reading activities. The format of the program, which includes a trained volunteer and their dog visiting the designated school or classroom on a regular basis, is flexible and adapted to suit the needs of the students and teachers. A recent evaluation conducted by Sorin et al. (2015), investigated the impacts of the Classroom Canines™ program on the reading

scores, social and emotional skills, and attendance rates of 11 primary school students aged 5-11 years old. Findings from the mixed methods study revealed that in addition to improvements in reading scores and attendance rates, students demonstrated greater motivation for learning, higher self-esteem and improved peer relationships. It has been suggested that one of the reasons for the success of reading to dogs is to a great extent due to the perception of dogs being non-judgmental companions (Friesen, 2010b). Animal assisted reading programs are currently running in America, Canada, India, Hong Kong, China, Australia, and the United Kingdom (Friesen, 2010a). Dog literacy programs are not limited to reading activities, rather it is suggested that there may be benefits for all curriculum areas. Classroom dogs promote learning through their physical presence in the classroom by encouraging students to be more attentive, cooperative, and alert (Friesen, 2010b), which enhances their classroom performance. Moreover, animals bring a sense of acceptance and understanding to the classroom and reduce stress and anxiety, which encourages children to overcome individual learning challenges and to feel more comfortable interacting with both peers and adults (Friesen, 2010b; Jalongo, 2015).

3.3.1 Values Education

The reviewed literature provides evidence to support the contribution of values-based pedagogy to the realisation of the goal of holistic education as

described in the *Melbourne Declaration* and the Australian Curriculum. De Nobile (2014) stressed that:

It is reassuring that there is an important place for values education to develop sound decision making capabilities in young people going into the future. The challenge for teachers and schools is to find ways to do it at the various levels so that the experience is relevant, engaging and has meaning through connections to the outside world beyond school.

(para. 11)

An examination of major theories of moral development, approaches to moral education and values education in the Australian context conducted in Part A of the literature review, revealed that current educational goals include the aim of educating for the development of ethical understanding. The revived interest in values education discussed in Part A of this literature review reflects what educational philosopher Richard Pring (2010) described as “the connection between so-called educational activities and systems on the one hand and the conceptions of personal wellbeing, on the other hand” (p. xix). Schools play an essential role in supporting parents and the community in general, in helping to foster a caring and compassionate future generation. Students ought to develop empathy for others, and in doing so develop their own emotions and feeling in relation to others as they become more morally considerate (Tan & Leong, 2006). A challenge for values education is to provide a process of socialisation that does

not amount to indoctrination. The goal ought to be to “both ‘educate the emotions’ and to ‘affect the intellect’. Our desires should be made ‘more intelligent’ while rational ways of thinking should be infused with more feeling” (Tan & Leong, 2006, p. 323). As children appear to have more empathy toward animals than humans this would suggest that the inclusion of Animal Studies could offer opportunities to experience and practise empathy in such a way as to contribute to further development.

Lovat (2007) highlighted the strong linkages between the ‘Values in Education’ initiative and the need for teachers to access suitable resource materials that probe ethical treatment of animals. Research conducted by Griffith University in 11 schools involving Year 7 and 10 teachers and students (97 teachers and 344 students) highlighted a strong interest but general lack of knowledge regarding the needs of animals, how animals are treated and ethics (Lovat, 2007). Most teachers surveyed believed that some of the values in the ‘Values Education’ initiative, although intended to only relate to humans, should also extend to animals (Tulloch & Verrinder, 2007). In 2007, the animal advocacy groups Voiceless and Compassion in World Farming (CIWF) hosted the Humane Education Symposium at Griffith University, Queensland. This was the first event focusing on humane education held in Australia, perhaps reflecting the general increase in social awareness relating to the role of animals in children’s lives. To demonstrate further the links between humane education and values education, CIWF (2015)

provided a resource for upper primary and secondary school teachers titled ‘Farm Animals and Us in Australia’, which directly linked with several core values outlined in the ‘Values in Education’ program.

3.3.2 Animals in Literature

Perhaps the most recognisable role of animals in values education to date is their use in literature and art where they are often used to represent or illustrate aspects of character, values, or culture. However, many children’s books inadvertently reinforce the traditional values that are attached to animals, or present anthropomorphic accounts to reflect cultural values, and the content and information contained within children’s books is often limited by what adults are comfortable to discuss (Duhn, 2012). However, there are also examples of literature that offer the potential to explore and reconsider the values relating to animals. One well-known example of a story that inspired compassionate action was *Black Beauty*, written by British author Anna Sewell and published in 1877. The book was presented as an autobiography of the main character, a horse named Black Beauty, and depicted the realistic life of a carriage horse in 19th century England. The themes of the story promote values such as compassion, respect, kindness, and integrity. Additionally, written in first person, the book enabled readers to experience the events from the horse’s point of view, thus promoting empathy with the main characters. Extensively distributed in America from 1890-1892 by the Massachusetts Society for the Prevention of Cruelty to Animals

(MSPCA) founder George Angell, the book generated widespread public sympathy for horses that resulted in substantial support for the newly formed MSPCA, the American Society for the Prevention of Cruelty to Animals (ASPCA), and the American Humane Association (AHA). As a result, Anna Sewell is recognised as an important influence on the early animal protection movement. This example demonstrates the influence of animal-focused literature on humane attitudes and values development, which illustrates the role of animals in values education. Recently, books and resources that challenge the traditional roles of animals as contrived characters for moral examples, as entertainers, athletes, or products for consumption have become more available, and social media and technology provide an effective medium to inform and engage a wider audience than was previously possible. Animal advocacy groups such as the RSPCA and Voiceless produce age appropriate electronic resources, and provide online environments that enable students, teachers and the general public to access a wide range of information and opportunities to become involved in animal issues. Such resources provide relevant and engaging material for ethical dialogue and values-based discussion.

An emerging body of research is showing that children are capable of making their own ethical decisions relating to animals (Hussar & Harris, 2010). Findings suggest that children's ethical decision-making relating to animals, for example whether to eat animals or not, is challenging for many adults who

themselves may have indistinct ethical boundaries and values about such issues (Herzog, 2011; Rice, 2013; Rowe, 2012). Recognising the different ethical boundaries and values relating to animals presents a valuable opportunity for values education. Respecting that individuals, societies, and cultures have different ethical boundaries or values, and exploring the ethical decision-making around this is an established practice in values education. The process is embedded within the scope of the Australian Curriculum general capability of Ethical Understanding (ACARA, 2013):

Students also need to explore values, rights and responsibilities to assist them in justifying their ethical position and in engaging with the position of others. The processes of reflecting on and interrogating core ethical issues and concepts underlie all areas of the curriculum. These include justice, right and wrong, freedom, truth, identity, empathy, goodness and abuse. (p. 1)

The advantage of animal-focused content for values education is that the diverse issues introduced by humane education and Animal Studies offer relevant and appropriate examples for reflection and ethical decision-making. Challenging the traditional role of animals and instead seeing them as sentient beings with distinct emotions and desires, highlights their valuable role in values education.

3.3.3 Humane Education

The reviewed literature provides evidence to support the contribution of values pedagogy to the realisation of the goal of holistic education as described in the *Melbourne Declaration* and the Australian Curriculum. In addition to considerations for relevance, engagement, and connectedness beyond school, the *Early Years Learning Framework* recommended that “Educators foster children’s capacity to understand and respect the natural environment and the interdependence between people, plants, animals and the land” (DEEWR, 2009, p. 16). The emphasis on respecting the natural environment and acknowledging the interdependence between humans, non-human animals, and the environment forms the basis of a field of education referred to as Humane Education (HE). HE is a pedagogical concept that centres on instilling the ethic of kindness to animals through formal or informal instruction. The origins of HE trace back to John Locke’s environmentalist theory of mind, as outlined in his essays *Concerning Human Understanding* (1690) and *Some Thoughts Concerning Education* (1693) (as cited in Bekoff, 2009) and it has since developed into a broad discipline that encompasses all forms of education about social justice and citizenship, environmental issues, and animal welfare. The early decades of the 20th century saw the introduction of compulsory HE requirements in a number of American states, the production of humane anthologies and textbooks, and the emergence of the professional humane educator (Institute for Humane Education [IHE], 2014).

The current aims of HE are: to assist children to develop attitudes and critical thinking skills in order to become more compassionate and respectful by recognising the interdependence of all living entities; and to provide an opportunity for children and adults to develop a sense of awareness and responsibility for the natural world, the environment, and for the animals who share it (World Society for the Protection of Animals [WSPA], 2011). HE programs introduce a wide range of concerns and encourage the development of attitudes of empathy and compassion, responsibility and justice. Through the process of raising awareness to the range of concerns, HE is also a means of introducing children to the sentience, emotions and intelligence of animals and linking this to an understanding of ecosystems and environmental issues.

To date, evaluations of HE have focused on the question of whether HE programs increase knowledge about humane concepts, improve attitudes and behaviour towards animals, and whether, or to what extent, this humane behaviour generalises to humane behaviour towards humans. Several evaluations of humane attitudes towards animals have been conducted following minimal instruction or participation in HE; for example, Hein (1987) showed an increase in humane attitudes among 8-10 year-old students after only three hours of instruction. Fitzgerald (1981) compared different types of interventions in fifth and sixth grade classrooms (10-and 11-year-old children). Four conditions were employed: Repeated Treatment (RT), where a teacher presented four humane education

lessons over an 8-week period; Intensive Treatment (IT), in which the same information was covered in a single class session; Light Treatment (LT), which included the same information presented as reading material with no direct instruction; and a Control Condition, where no intervention occurred. A “fireman test” in which children were provided with a list of inanimate possessions and pets, and asked to select which they would attempt to rescue from a burning home, was used in the pre- and post-tests to assess the degree of change in children’s attitudes towards animal life. The mean score for the IT condition was significantly higher (more humane) than those for the three other groups, suggesting that a focused classroom presentation conducted by a teacher was the most effective means of enhancing humane attitudes towards animals. In a similar study, Malcarne (1983) studied a group of 33 third and fourth grade students (8- and 9-year-old children) to assess the effects of drama and role-playing on children's empathy and pro-social behaviour toward humans and animals. A third of the group received dramatisation and role-playing experience related to human victims of distress, 11 with animal victims, and the remaining third acting as the control group were read *The Gift of the Sacred Dogs*, a book by Paul Goble (1984) featuring animals but depicting neither human nor animal victims. After students had listened to the story, they participated in a discussion focused on story content rather than role taking. The duration of each condition was one hour, after which all students were post-tested on three measures: (1) story resolution where either a human or an

animal victim of distress was the subject (response was scored for helping and empathy); (2) the Fireman Test; and (3) willingness to volunteer at either a children's hospital or an animal rescue centre. The findings showed that children who participated in role-play based around animal distress scored higher on the Fireman test than did the other two groups. Both treatment groups had higher scores on the animal version of the story resolution test than the control group and expressed a greater willingness to volunteer at a children's hospital than did the control group. Willingness to volunteer at an animal rescue centre was higher for the group who participated in role-play around animal distress than for the other two groups. This suggests that 8- and 9-year-old children are able to learn about humane behaviour towards animals and humans through role-play.

In addition to evaluations of short-term HE programs, several evaluations of longer-term HE programs have been conducted. Ascione, Latham, and Warthen (1985) assessed the effects of a school-based intervention implemented by teachers, who, along with 4- to 11-year-old students were randomly assigned to an intervention or control condition. In the former, teachers implemented the National Association for Humane and Environmental Education's (NAHEE) curriculum guide over the course of the school year (10 hours in total). The control group continued regular classroom learning activities and were not present during the intervention. Children were pre- and post-tested on their attitudes to companion and non-companion animals; results showed kindergarten children and first

graders (six-year-olds) in the intervention group scored higher for attitudes towards animals than the control group. Older children tended to have more positive attitudes towards animals than younger children at baseline, so it is possible that these children may not have scored significantly higher even if their attitudes had improved. Following this study by Ascione et al. (1985), in 1990 Ascione (1992) implemented and evaluated a classroom-based humane education intervention program based on the same NAHEE curriculum-blended guides and KIND News (a weekly newsletter focused on animal-related issues). This study involved children aged 6, 7, 9, and 10 divided equally and randomly into experimental and control groups. Teachers of the intervention group were instructed to spend a minimum of 40 hours on the subject (as opposed to 10 hours in the previous study). The children were pre-and post-tested using self-reported measures of attitudes toward animals and human-directed empathy. This study found that the intervention enhanced the animal-related attitudes of children differentially depending on age. No significant differences were found between the intervention and control groups for 6, 7, and 10-year-old children. However, the humane attitudes of the 9-year-old children improved and a generalisation effect from animal-related attitudes to human-directed empathy was shown. To investigate whether these effects were maintained, Ascione and Weber (1996) carried out retention testing one year later, where over 80% of the original sample of 9-year-old children were located and retested. The researchers found the

children who had received instruction maintained higher humane attitude scores than those who had not been instructed, suggesting that humane education can be effective and sustainable.

Expanding on studies focused on the development of humane attitudes, Nicoll, Trifone, and Samuels (2008) investigated whether an improvement in humane attitudes resulted in improved behaviour towards animals. The study measured the effect of the WLA (We Love Animals!) classroom-based humane education programme, and the efficacy of a printed humane education publication. The WLA is a six-lesson program that aims to foster positive attitudes, encourage empathy and understanding of animals, and heighten awareness of their needs and quality of life. The program was conducted with 6-year-old children over a four-month period with each lesson lasting approximately 25-30 minutes. Children's attitudes and the extent of bonding with a companion animal were assessed before and after the intervention (using the Pet Attitude Scale and the Companion Animal Bonding Scale). The classroom-based component improved attitudes toward non-human animals, compared to those who did not participate. However, neither the printed nor the classroom material affected the self-report measure of actual interactions with a companion animal, suggesting that a classroom-based approach might change students' attitudes, but it might not necessarily lead to the enactment of behavioural change.

The growing acceptance of the connections between violence towards animals and violence towards humans has received great attention and although humane education has traditionally been supported by animal welfare organisations, the area is attracting greater interest amongst human services organisations. In a paper promoting the introduction of universal Humane Education in American schools as a strategy of prevention, detection and intervention of violence, Faver (2010) claimed that school-based violence prevention programs had failed to consider the pervasiveness of children's exposure to animal abuse and the connection between childhood animal abuse and separate forms of violence during adolescence and adulthood. Faver suggested that the characteristics of HE provide an effective model for the prevention of the onset of violent tendencies through the fostering of humane attitudes towards humans and animals, and the detection and intervention of exposure to or engagement in violence towards animals. Drawing upon existing evaluation research to support the effectiveness of HE in fostering kindness, respect, and empathy, and highlighting the growing evidence of the link between forms of violence, Faver stated:

Given the levels of violence in families and communities, human services professionals cannot afford to overlook a potentially powerful mode of primary prevention. Building empathy and inhibiting aggression are the twin themes underlying humane education. The

centuries old insight that treatment of animals and treatment of people are connected has gained empirical support in the past half century. All that remains is to act on this knowledge to foster compassion and kindness for both people and animals. (p. 369)

3.4 Human-Animal Relationships

Human-animal studies (HAS) is a multi and interdisciplinary field that focuses on the study of the “interactions and relationships between human and non-human animals” (DeMello, 2012, p. 5). In recent years, there has been a prolific increase in the amount of research and number of publications relating to diverse aspects of HAS in the social sciences and humanities fields; including, psychology, sociology, anthropology, political science, history, and literary criticism. A list of topics published in the journal *Society & Animals* (2016) demonstrates the scale and diversity of research enquiry, however; the availability of research that directly informs the specific focus of this study, the development of ethical understanding, remains limited. For this reason, although the value of more recent work in the field of HAS is acknowledged, the studies reviewed in this section were judiciously selected as those offering valuable insights to inform the design and execution of this current study.

The origins of the interest in the relationships between humans and animals can be traced to the work of the psychologist Boris Levinson (1965, 1969), who explored the use of animals within therapeutic settings. Levinson’s work

subsequently provided incentive for further empirical research and established the recent focus by psychologists and medical researchers on the effect of interactions with animals and pet ownership on human mental and physical health (e.g., Eddy, 2000; Friedmann, 1995; Friedmann & Thomas, 1995; Garrity & Stallones, 1998). Additionally, the increasing popularity of pets in society and the recognition of the progressive role change from utility and consumption to companionship and bonding kindled further psychological interest. At present, the majority of existing literature focuses on the positive, psychological, psychotherapeutic, and medical outcomes gained by humans as a result of interaction with companion animals (Arkow, 2015; Gullone et al, 2004). For example, studies have found that interactions with animals have; combated depression (Frederick, Hatz, & Lanning, 2015; Triebenbacher, 2000); increased social interaction among humans (Antonacopoulos & Pychyl, 2014; Hart et al., 1987; Lockwood & Hodge, 1986); minimised the effects of loneliness due to lost social support (Adkins & Rajecki, 1999; Garrity et al., 1989); and reduced stress (Allen, Blascovich, Tomaka, & Kelsey, 1991; Siegel, 1990). Such studies, although not directly related to education, are significant not only for the reason that they illustrate the influence of animals on aspects of human social and emotional wellbeing that are related to values development, but also because animals are recognised as having a far greater role in human lives than may have previously been considered. As companion animals have become progressively more integrated into human lives,

they have fulfilled an increasingly important role for individuals and within family structures (Thompson & Gullone, 2003). This changing dynamic has sparked further research on the role of non-human animals in the psychological and social development of children (e.g., Arkow, 2015; Levinson, 1983; Westerlund, 1982).

A range of studies focused on the area has demonstrated interest in the role of animals in children's development. Developmental changes in the quality of children's humane attitudes were assessed by Kellert and Westervelt (1983); Rheingold and Emery (1986) explored the origins of humane attitudes in young children; Fogel, Melson, and Mistry (1986) included values and attitudes toward animals as foundational in the demonstration of nurturance behaviour by children including "guidance, protection and care" (p. 55); Kanner, Feldman, Weinberger, and Ford (1987) included pet-related items in their measures of "uplifts and hassles in early adolescence" (p. 371); and Serpell (1999) established an association between childhood companion animal keeping and increased concern about animal and human welfare. Similarly, Fawcett and Gullone (2001) demonstrated that the presence of a companion animal during childhood may lead to an increased sensitivity to the feelings and attitudes of others. In a year-long study in a preschool setting, Myers (1998) focused on the relationships that children aged between 3 and 6 years old have with a wide variety of animals, including a dog, turtles, a guinea pig, goldfish, doves, ferrets, pythons, a spider monkey, insects, and squirrels. Based on his observations, field notes, interviews,

and video recorded sessions, Myers proposed that young children begin to understand that animals display four properties that remain constant across many different interactions; “agency, affectivity, coherence and continuity” (p. 10). Such understandings make it possible for children to recognise that animals have their own subjective states and can have interests in interacting with humans. In Myers’ (1998) view, animals appear to be:

Optimally discrepant social others by the time of early childhood, offering just the right amount of similarity to and difference from the human pattern and other animals’ patterns to engage the child. Crucially, animals are social others... because they display the hallmarks of being truly subjective others. (p. 10)

More recently, Myers (2007) asserted that “living animals are central presences to young children” (p. 6). As children come to understand an animal as a social other, animals can become a source of companionship and support. For example, a study by Covert, Whirren, Keith, and Nelson (1985) found that 75% of the children aged between 10-and 14-years old said that when they were upset, they chose to spend time with their pet. Myers (1998) suggested that one reason for this is that animals “pose less potential [than humans] for deceit, competition, manipulation, betrayal, and rejection” (p. 115). More generally, Melson (2001) wrote in her account of animals in the lives of children, that:

One of the most important yet unrecognized functions of pets – from dogs to goldfish – for children may be their *thereness* ... This constant availability may be a major reason why many children bestow the honorific ‘my best friend’ on their pets ... Their animate, responsive proximity makes children feel less alone in a way that toys and games, television or video, even interactive media, cannot. (p. 59)

According to Melson, children who have experienced unsupportive or abusive relationships based on dominance may never have had the opportunity to develop competent relationship skills. Incorporating animals into children’s lives is suggested by Melson and others (e.g., Ascione, 1992; Ascione & Weber, 1996; Paul, 2000) as being an effective means of providing children with opportunities to practise aspects of nurturance and care; fostering these skills is an aim of both values education and HE.

Noddings (1984) stated that schooling ought to include “education in the practices of care and empathy” (p. 153). Furthermore, both the *Melbourne Declaration* and the Australian Curriculum identify the development of empathy as an aim for education (ACARA, 2012a; MCEETYA, 2008). Gibbs (2003) defined empathy as a “biologically and affectively based, cognitively mediated, and socialized predisposition to connect emotionally with others” (p. 79). Hoffman (2000) described empathy as the “spark of human concern for others, the glue that makes social life possible” (p. 3). Included in the HAS literature is evidence of the

value and benefits that animals have for children, including making a significant contribution to the development of empathy. For example, Bryant (1982) explored how relations with companion animals may relate to children's empathic tendencies toward humans. Poresky (1990) assessed the relationship between children's bond with their pets and their generalised empathy levels as part of the validation of the Young Children's Empathy Measure. The study included 38 children aged between 3 and 6 years old. The children were presented with four short stories designed to assess the child's ability to identify emotions including fear, anger, sadness, and happiness. In order to assess both generalised empathy and empathy towards pets, the stories were presented twice, once with a child as the subject and once with a dog as the character. The findings of the study revealed that although children who shared a home with at least one companion animal did not demonstrate higher levels of empathy than children who did not live with companion animals, children who had high levels of empathy towards their companion animals did also have higher child-directed empathy levels than children without companion animals. A further study by Poresky and Hendrix (1990) found that children's attachment to their pets was linked with increased social competence as well as empathy. Later work by Vidovic, Stetic, and Bratko (1999) involved 826 children aged between 10 and 15 years old in an investigation of the role of companion animals in children's ability to develop satisfactory human relationship. The results of the study were consistent with Poresky's (1990)

and Poresky and Hendrix's (1990) findings, which reported a correlation between children's attachment to animals and increased empathy and pro-social orientation. More specifically, the results found that children with high Pet Attachment Scale scores attained significantly higher Empathy and Prosocial Orientation Scales scores than children who achieved below average scores on the scales. Similarly, Melson (2003) identified common emotional benefits, including empathy, that can be gained from the relationships between children and their pets. The findings from these studies support the existence of a relationship between empathy towards animals and generalised empathy towards humans. However, it has been suggested that this association may be related to affective aspects of empathy, meaning that an individual who is sensitive to the emotions of animals is likely to be sensitive to human emotions also (Paul, 2000). The relationship between the attachment to animals and levels of cognitive empathy has not yet been established; this highlights the need for a multidimensional approach to evaluations of humane education. Interestingly, although little assessment of the relative efficacy of animal-present versus animal-absent HE has occurred, a study by Arbour, Signal, and Taylor (2009) demonstrated that an animal-absent, literacy-based HE program resulted in significant increases in students' empathy levels towards animals (p. 149).

3.5 Animal Studies

In much the same way that expressions such as ethics, morals, and values are used interchangeably, the terms Human-Animal Relationships, Human-Animal Studies, and Animal Studies are frequently employed to describe any consideration of human - non-human animal associations. However, certain attributes of Animal Studies distinguish it from other fields. As introduced earlier in Chapter 1, Animal Studies is a multidisciplinary field focused on the study of the interactions and relationships between human and non-human animals. In addition to this, research in Animal Studies examines definitions of humanity in relation to animals, the extent to which representations of non-human animals inform knowledge and understandings of the world, and reconceives traditional categories in the context of a renewed reverence for animal life. Waldau (2013) argued that by focusing on the construct of animal, rather than the human-non-human animal relationship, Animal Studies challenges the construct of human superiority, and that by positioning the human within a more-than-human world, understandings gained from Animal Studies “elucidate contemporary interactions with other-than-human animals and thereby plumb the very meaning of community and society” (p. 220). To illustrate the significance of this distinguishing feature, in contrast to Humane Education, education based on principles of Animal Studies would facilitate the study of animal sentience and emotion independently from consideration to the sentience and emotions of

humans. The import of this distinction is explored in the book *The Educational Significance of Human and Non-human Animal Interactions: Blurring the Species Line* (Rice & Rudd, 2015), which seeks to contribute to further understanding surrounding the role of animals in an educational context.

3.6 Summary of the Aims of Animal-Focused Approaches in Education

A review of the literature surrounding prevalent animal-focused approaches used in the educational context revealed a number of explicit and implicit aims and measurable outcomes. The identified aims and outcomes are summarised below in Table 3.1. The summary shows that although there are no aims specifically focused on the development of ethical understanding, several of the aims and outcomes are directly related to the dimensions of ethical understanding discussed in Part A of the literature review. The relevance of such aims and outcomes to the multidimensional development of ethical understanding is discussed in section 3.7.

Table 3.1

Aims and Outcomes of Animal-focused Approaches in Education

Approach	Author	Aims/Outcomes
Animal Assisted Therapy (AAT)	Friesen (2010b)	Behavioural objectives
	Mallon (1994), Geist (2011), Meadan & Jegatheesan (2010)	Social and emotional development
Animal Assisted Activities	Friesen (2010b)	Increased engagement in learning

	Kruger & Serpell (2006)	Encourage positive interactions
Animal Assisted Literacy Programs	Jenkins (2009)	Improve literacy outcomes
	Sorin, Brookes, & Lloyd (2015)	Enhance social skills
	Bassette & Taber-Doughty (2013)	Increase engagement in literacy tasks
	Jalongo (2005, 2015)	Encourage positive interactions with peers/adults
Humane Education	Hein (1987)	Increased humane attitudes
	Fitzgerald (1981)	Enhanced humane attitudes towards animals
	Malcarne (1983)	Recognition of humane behaviour towards animals and humans
	Ascione, Latham, & Warthen (1985)	Positive attitudes towards animals
	Ascione (1992)	Generalised effect from animal-related attitudes to human-directed empathy
	Ascione & Weber (1996)	Retention of humane attitudes
	Nicoll, Trifone, & Samuels (2008)	Improved behaviour toward animals

Human-animal Relationships	Kellert & Westervelt (1983)	Development of humane attitudes
	Rheingold & Emery (1986)	Origins of humane attitudes in young children
	Serpell (1999)	Increased concern relating to animal and human welfare
	Fawcett & Gullone (2001)	Increased sensitivity to feelings of others
	Myers (1998, 2007)	Recognition of the interests of others
	Covert, Whirren, Keith, & Nelson (1985)	Emotional support
	Melson (2003)	Emotional benefits including empathy
	Bryant (1982)	Empathy development
	Poresky (1990)	Generalised empathy
	Poresky & Hendrix (1990)	Social competence
	Melson (2001)	Social and emotional skills
	Paul (2000)	Emotional sensitivity

3.7 The Contribution of Animals to the Development of Ethical

Understanding

Through the examination of theories of moral development and models of education for the promotion of ethical understanding, and the exploration of the

role of animals in society, education, and children's development, it is possible to illustrate the potential contribution of animals to the development of ethical capabilities through the means of a multidimensional model of ethical understanding.

3.7.1 Ethical Judgement

Ethical Judgement involves the process of thinking through recognised moral challenges and determining a preferred course of moral action. As discussed in the first chapter, substantial theoretical frameworks of moral reasoning exist (Damon, 1977; Gilligan, 1980; Kohlberg, 1976; Piaget, 1965). Rest's four-component model consists of three levels of moral reasoning; pre-conventional, conventional, and post-conventional. There is evidence to suggest that individuals progress through the three levels as they mature, and that this progression is subject to the influence of education and ethics education programs (Rest & Narvaez, 1994; Rest, Narvaez, Bebeau, & Thoma, 1999). Ethical judgement is not limited to the application of reasoning strategies in order to reach ethical decisions; rather, it involves the interpretation and evaluation of values in a process of ethical judgement. An individual's capacity for ethical judgement is influenced by their ability to recognise ethically significant concerns and to interpret similarities and differences between the interests involved. Evidence for the construction of moral similarities and differences across species emerged in Khan's (1999) research on environmental moral reasoning, and particularly his characterisation of two forms

of biocentric reason. According to Kahn, one form of reasoning occurs through establishing “isomorphic relationships” between humans and non-humans, allowing children to view an animal’s desire as equivalent to that of a human’s desire. Kahn’s study found that as a result of this “direct equivalency, children reasoned that animals merit the same moral consideration as do humans” (p. 8). A second form of biocentric reasoning arises through establishing “transmorphic relationships”, which is evident when a child “moves beyond a reciprocity based on directly perceivable and salient characteristics to be able to establish moral equivalences based on functional properties” (p. 9). When children achieve transmorphic reasoning they are able to recognise similarities and differences between many species and contexts. Kahn stresses that isomorphic and transmorphic reasoning concern moral equivalences considered important to both animals and humans, as opposed to anthropomorphic reasoning, where an animal is equated to a human. The processes of biocentric reasoning reflect the reviewed literature relating to Human-Animal Relationships and Animal Studies, which suggests that animals play a role in ethical judgement capabilities.

3.7.2 Ethical Sensitivity

Ethical Sensitivity involves recognising that ethical issues exist within a situation and emphasises that moral behaviour can only occur if an individual assesses the situation as moral and is aware of how one’s actions affect other people. Such recognition requires the skill of identifying when an ethical response

is appropriate, being aware of how our behaviour affects others, identifying possible courses of action, and determining the consequences of each potential strategy. Empathy and perspective skills are essential to identifying and exploring moral issues. Understanding how others might feel or react can alert us to the potential negative effects of our choices and makes it easier to predict the likely outcomes of various options. The previously discussed literature suggests that animals play a role in the social and emotional development of children that may contribute to ethical sensitivity. Early childhood attachment to animals contributes to the foundations of nurturance (Fogel, Melson, & Mistry, 1986), and ongoing human-animal relationships and education results in increased concern over animal and human welfare (Arbour et al, 2009). Sensitivity to the feelings and attitudes of others can be enhanced through learning about and interacting with animals (Fawcett & Gullone, 2001). Animals provide emotional benefits to children (Melson, 2001) and contribute to an increased pro-social orientation (Poresky & Hendrix, 1990) and pro-social competence (Vidovic et al., 1999). The literature also shows that animals play a significant role in empathy development. Arbour, Signal, and Taylor (2009) demonstrated that humane education increased empathy levels towards animals and that empathy for animals generalises toward humans. Paul (2000) and others (e.g., Ascione, 1992; Ascione, 1997; Bryant, 1985; Poresky, 1996) propose that a positive disposition toward animals predicts a positive disposition toward humans. Therefore, efforts to encourage attention to,

and concern for the needs and feelings of animals may contribute to the overall development of ethical sensitivity.

3.7.3 Ethical Identity

Ethical Identity involves prioritising the moral over other significant concerns and personal values, and emphasises the choice made to be moral over other possible behaviours that are valid and significant; as such, this component is dependent on self-identity and attitude. Colby and Damon (1992) described moral identity as having a sense of self as a moral being. Blasi (1984) regarded ethical identity as a characteristic emerging from developmental processes influenced by social experiences. Adolescence has been identified as a significant period for ethical identity development, as it is at this time when extrinsic factors become less important, and ethical motivation becomes increasingly internally driven and centred on ethical concerns (Hardy & Carlo, 2005, 2011; Turiel, 2006). The development of self-identity is thought to be shaped by a range of factors; the literature suggests that animals might play a significant role in the development of self-identity and attitude. Animals are identified as contributors to the foundations of children's humane attitudes (Rheingold and Emery, 1986) and humane attitudes can be enhanced by learning about animals (Ascione & Weber, 1996; Cameron, 1993; Fitzgerald, 1981; Hein, 1987; Latham & Warthen, 1985; Nicoll, Trifone, & Samuels, 2008). Malcarne (1983) argued that animals influence human behaviour, and reported that humane education enhances humane behaviour towards both

animals and humans. Self-identity is also influenced by the manner in which people are treated, and several studies have shown that the presence of an animal is able to influence the way that people respond to others. For example, dogs have been identified as facilitators of contact and conversation among their carers in a public setting (Robins, Sanders, & Cahill, 1991), and people in public spaces who are accompanied by a pet are viewed as more approachable by others (Messent, 1983). Similar studies have shown that people with an animal present are rated by observers as happier, friendlier, more relaxed, and less threatening than people not accompanied by an animal (Antonacopoulos & Pychl, 2014; Eddy, Hart, & Boltz, 1988; Mader, Hart, & Bergin, 1989). Furthermore, individuals who have experienced emotional attachment to dogs are more likely to exhibit a positive outlook (Arkow, 2015; Bergler, 1995). In addition to these findings, there is also value in observing children interacting positively with animals as caregivers and educators view children more positively when they are caring for another being. Further, “taking care of animals teaches children responsibility and lets them know they count. Caring for animals can be the first step towards developing the humane ethic: a concern for other people that comes from the opportunity to love and be loved” (Ross, 1999, p. 368). These studies suggest that animals might play a significant role in the development of a positive ethical identity.

3.7.4 Ethical Character

Ethical Character involves the capability to construct and implement actions to achieve the moral outcome and emphasises the processes by which an individual undertakes an appropriate course of action, avoids distractions and maintains the courage to continue. Rest and Narvaez (1994) define this component as the character elements of “ego strength, perseverance, backbone, toughness, strength of conviction, and courage” (p. 24). These are skills of effective moral action that may be enhanced through interactions and attachment to animals. Animals play a role in the psychological and social development of children (e.g., Levinson, 1983; Westerlund, 1982). Children or adolescents who have a pet are likely to have higher self-esteem (Filiatre, Millot, & Montagner, 1985) and students who have animals are shown to be more popular with their school peer group (Guttman, Predovic, & Zemanek, 1983). Animals can also assist in confidence such as young females report feeling more confident in public places when accompanied by a dog (Salmon, Telford, & Crawford, (2004)

3.8 Considerations for Animal-Focused Approaches to Education

A final consideration of the role of animals in education is the effect of their inappropriate inclusion, or unintentional exclusion, from the learning environment on the learners that experience it. It was once regarded that direct personal interactions with living animals provide the best opportunity for the bonding and empathetic responding between student and non-human animal (e.g., Ascione,

1992; Davis & Balfour, 1992; Shapiro, 1990; Weatherill, 1993). This was attributed to the actual and observable consequences in such a situation for making poorly informed choices regarding learning activities, habitat provision, or selection of appropriate animal subject, meaning that students and teachers must confront and accept the consequences of decisions made. Although the intention of introducing the presence of living animals into the classroom might be to increase appreciation of learners for the real animal and its experience of life, the practice presents an obvious animal welfare dilemma. Young (2009) noted, that although animals were appreciated in their educational role, teachers often undervalue their potential for establishing “deeper ecological understandings” (p. 209), without which children might not develop a full understanding of animal needs and welfare. Tipper (2011) pointed out that within an educational environment, animals become “objects for human utility” rather than “individuals with whom children relate and for whom they care” (p. 149). As a result of classroom observations, Melson (2001) noticed that despite the positive intentions of the teacher, there was a subtle change in the student-animal relationship and the animals did not acquire the equal status as the students’ family pet companions. This was attributed to the fact that “in a classroom, zoo, or nature centre, animals, even the same species kept as household pets, are no longer companions, confidants, and loved ones—in other words, intimates; they become objects of inquiry” (Melson, 2001, p. 74).

Further criticism from the literature refers to negative emotional adaptations that occur during inappropriate interactions with animals or when learning about animals; more specifically the distancing, dulling of emotion, objectifications of the animals, and the desensitisation to suffering or injustice that educational uses of animals can have on the people who participate (e.g., Davis & Balfour, 1992; Pederson, 2011; Shapiro, 1990). Such studies suggest that in order to ensure no detriments to animal welfare or students' moral sensitivities, informed consideration needs to be undertaken prior to the inclusion and representation of animals within the educational environment. It is difficult to ensure that behaviour towards the animals will be appropriate or sensitive to the animals needs and the welfare of any animal is compromised by removal from their usual environment and companions, and during transport. Further to this, employing an animal to fulfil human goals should be considered carefully to ensure that it is not incongruent with the aims of the activity (Loar & Colman, 2004; Raphael, Colman, & Loar, 1999).

3.9 Summary of the Literature Review

Part A of this literature review began with the brief introduction of classic theories and current research relating to moral development before four influential models of moral education were described and discussed. Next, the Australian context was considered with a discussion on values education, holistic education and values-based pedagogy. The second part of this literature review examined the

changing role of animals in society with a focus on animal welfare, animal advocacy, animal law, and animal ethics. The role of animals in human lives was further explored through considerations of beneficial human-animal relationships and the animal related indicators of deficiencies in ethical development. Research question 2 was addressed through the examination of animal-focused educational strategies, which revealed the aims of HE and the extent to which they reflect the aims of education for the promotion of ethical understanding. Finally, a summary of the literature was drawn upon to illustrate the potential role of human-animal relationships as contributors to the multidimensional development of ethical understanding.

CHAPTER 4

RESEARCH DESIGN

The purpose of this study was twofold: firstly, to investigate the role of human-animal relationships in fostering the development of ethical understanding, and secondly, to see to what extent the inclusion of a curriculum-based Animal Studies Literacy Program contributes to the realisation of the aims of education to promote ethical understanding in children. This section presents a comprehensive account of the research approach, design, procedures and processes used in this study. An overview of the investigative framework illustrating the procedures and products of data collection is provided. Finally, ethical considerations relating to this study, including issues of representation and legitimisation, trustworthiness, validity and credibility are discussed.

Part A of the literature review outlined theories of moral development, discussed values education in the Australian context, and explored current recommendations for values-based pedagogy. Examination of the literature identified the common aims of moral education and general agreement that effective education for ethical understanding requires the consideration of the multidimensional nature of ethical development, including ethical sensitivity, ethical judgement, ethical identity and ethical character. The literature indicated that further knowledge surrounding the developmental processes of each component, and the relationship between individual dimensions would contribute

to the realisation of the aims of education for ethical understanding. Part B of the literature review identified the changing role of animals in society, examined the role of animals in education, and explored the potential of animals as contributors in the development of individual dimensions of ethical understanding. The combined parts of the literature review revealed aspects of inquiry that are worthy of further investigation. These aspects of inquiry were framed by the following research questions:

RQ1 What are the aims and approaches of animal-focused educational strategies?

RQ2 What role can human-animal relationships play in fostering the development of ethical understanding in children?

RQ3 How can the inclusion of Animal Studies within the Australian curriculum contribute to the aims of education to foster the promotion of ethical understanding?

The nature of the research questions informed the research design and determined the investigative framework employed to address the research objectives. The investigation began with a comprehensive review of dominant theories of moral development, existing research relating to moral education, and current literature and policy guiding education practice, and further exploration of the literature relating to the role of animals in society, the investigation of human-animal relationships and the representation of animals in education underpinned the foundation of the inquiry. An explicit description of the methods employed to

conduct the critical review was provided in Literature Review Part B. The insights gained from the critical review informed the design of a small-scale case study for the collection of quantitative and qualitative data. It is the research approach, design, procedures and processes involved in the conducting of the case study that are described in this chapter.

4.1 Research Approach

The process of planning a study requires researchers to consider the “philosophical worldview assumptions that they bring to the study, the research design that is related to this worldview, and the specific methods or procedures of research that translate the approach into practice” (Creswell, 2014, p. 5). Creswell and Plano Clark (2011) referred to worldviews as organising frameworks that provide a foundation for research design. The four worldviews described by Creswell and Plano Clark were: (1) Post positivism, (2) Constructivism, (3) Participatory, and (4) Pragmatism (p. 42). The multi-dimensional nature of this study called for an approach that facilitated the selection of appropriate measures and methods to investigate individual dimensions of ethical understanding identified within the literature review. Additionally, the measures selected were required to be appropriate for use in combination to elicit a comprehensive understanding of the relationship between each dimension and the influence of animals on the development of children’s ethical understanding. For this reason, it was decided that the pragmatism worldview provided the most appropriate framework for this study.

A further consideration for adopting the pragmatism worldview was the recognition that decisions regarding the selection of strategies, approaches, and methods are influenced by researchers' axiological assumptions. Prior to graduating as a primary teacher, I had a professional background as an animal trainer and behaviourist, with a particular interest in human-animal relationships. Through my work, it became apparent to me that individuals often drew upon the quality of their relationships with animals, their values about animals, and their attitudes towards animals to make sense of ethical concepts not related to animals. This prior experience strongly influenced the purpose and design of this project and contributed to the selection of a pragmatic approach to inquiry. The axiology of pragmatism is that "reality is constructed through transactional experiences where humans interact with an environment that is constantly changing" (Beatty, Leigh, & Lund Dean, 2009, p. 109). Therefore, values are relative and situational, and as the culture changes so do its values. As such, the pragmatist belief that knowledge is gained by examining interactions with the environment, and that as the nature of the world is ever-changing knowledge is always subject to review, offers a "valid epistemological justification and logic for mixed methods research" (Johnson, Onwuegbuzie, & Turner, 2007, p. 125).

Pragmatism supports the utilisation of a broad range of qualitative and quantitative analysis techniques in an attempt to satisfy one or more of five mixed methods research purposes identified by Greene, Caracelli, and Graham, (1989): "tri-angulation; complementarity; development; initiation; or expansion" (p. 256).

Decisions made regarding the individual and combined purposes of quantitative and qualitative aspects of the research and the resulting mixed methods research design, assist pragmatist researchers to determine which of three types of mixed analysis should be undertaken. Onwuegbuzie, Slate, Leech, and Collins (2007) identified the three types of mixed analysis as “parallel mixed analysis, concurrent mixed analysis, or sequential mixed analysis” and recommend that if the purpose of mixing is complementarity any of the three formats of mixed analyses can be used (p. 11). If triangulation or initiation represents the purpose, then both parallel and concurrent mixed analyses are viable. If development is the purpose, then concurrent and sequential mixed analyses are appropriate, and finally, if the purpose of mixing analyses is expansion then a sequential mixed analysis is suitable (Onwuegbuzie et al. (2007). As the aim of this study was to combine both qualitative and quantitative data to provide a complementary interpretation, a parallel design was selected as most appropriate.

Although pragmatism is the foundation worldview for the overall study, the research design features a case study approach that draws upon a constructivist paradigm. Crotty (1998) explained constructivism as an epistemology which “recognises that meanings are not subjective and personal but are socially generated constructions within the interchange of perception and the object of experience” (p. 42). The assumption is that knowledge is created both by the individual and as a process of social exchange. Lyle (2000) emphasised the nature of social constructivism, pointing out that “learning is situated in a social, cultural

and historical context” and, as such, a social constructivist approach to research aims to avoid studying humans as though they were confined within an “isolated environment” (p. 49). The approach taken in this study accounted for the social version of constructivism by acknowledging the importance of context, of individual perspectives, and experiences of reality. The motivation that drives the constructivist approach to research is the belief that understanding social phenomena from the participant’s perspective is a worthwhile epistemological endeavour. When considered from an ontological perspective, “social constructivism acknowledges that human consciousness is seen as actively creating the objects of experience” (Crotty, 1998, p. 44). These compatible factors support the appropriateness of using separate complementary worldviews within a mixed methods approach.

4.2 Mixed Methods Research

The methodology that framed and guided the current study was the mixed methods methodology as described and advocated by Creswell (2014), and Creswell and Plano Clark (2011). Mixed methods research, as defined by Creswell and Plano Clark (2011), is a research design with distinctive philosophical assumptions and methods of inquiry. Mixed methods research is an approach to inquiry that involves collecting and analysing both quantitative and qualitative data, integrating the two forms of data and using distinct designs guided by philosophical assumptions and theoretical frameworks. The core assumption of a mixed methods form of inquiry is that the “use of quantitative and qualitative

approaches, in combination, provides a better understanding of research problems than either approach alone” (p. 5). Johnson and Turner (2003) also referred to the fundamental principle of mixed methods research, which recognises that “all methods have their limitations as well as their strengths” (p. 299). One advantage of combining both quantitative and qualitative research is the moderation of the inherent weaknesses of either approach. Similarly, Onwuegbuzie and Leech (2005) found that the inclusion of quantitative data collection, analysis and interpretation in qualitative evaluations aided the interpretation of significant findings; and that quantitative data collection, analysis and interpretation added meaning to qualitative findings. The authors concluded that, “the use of mixed methods data-analytic techniques should be seen as the real gold standard for achieving *verstehen* [understanding] in educational evaluation research” (p. 786).

Mixed methods research does not rely on a single, linear approach, but instead can follow six major design categories: (1) Convergent Parallel Design, (2) Explanatory Sequential Design, (3) Exploratory Sequential Design (4) Embedded Design, (5) Transformative Design, and (5) Multiphase Design (Creswell & Plano Clark, 2011, pp. 69-70). This study used the Convergent Parallel Design. This particular design has been discussed by a number of researchers from different ideological frameworks and has previously been referred to as a triangulation design. Gall, Borg, and Gall (1996) suggested that multiple methods, data sources or theories could help check the validity of case study findings; however, it was also noted that although triangulation might produce convergence, it could also

reveal contradictions between conflicting types of data. Denzin and Lincoln (2005) described the design as an alternative to validation rather than a strategy of validation, and explained triangulation as the use of multiple methods for the purpose of securing an in-depth understanding of the research phenomenon. Stake (2005) claimed that “triangulation helps to identify different realities” and suggested that since observations or interpretations are impossible to replicate, triangulation can assist in the clarification of meaning by identifying different ways to view the case (p. 454). Using Creswell and Plano Clark’s framework, the decision to adopt the convergent parallel design in this study was to obtain different yet complementary data on the same topic, for the purpose of directly comparing and contrasting qualitative findings with quantitative results.

The purpose of mixed methods research directs the type and number of data sources to be analysed, and whether equal status or priority is assigned to either the qualitative or quantitative data. In this study, data sources were apportioned equal status for the reason that each source would contribute equally meaningful information. To achieve this, a convergent parallel mixed methods case study design was adopted. In the convergent parallel design, quantitative and qualitative data are collected separately and independently, and the results are subsequently converged by comparing and contrasting during the interpretation phase. Creswell and Plano Clark (2011) suggested that to assist in conveying the complexity of the mixed methods design, visual diagrams be employed as aids for expressing the

procedures, methods, and products of a mixed methods study. An illustration of the convergent parallel mixed methods design is provided in Figure 4.1.

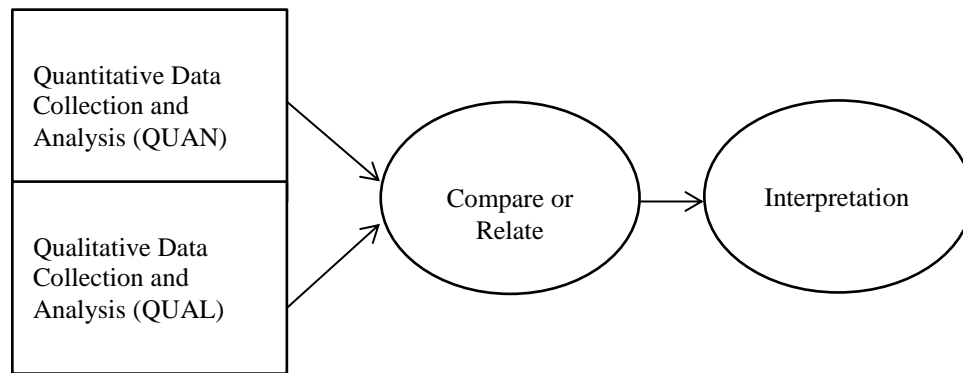


Figure 4.1. Convergent parallel mixed methods research design (Creswell, 2014, p. 220).

In order to employ mixed methods in an effective manner it is necessary to consider the relevant individual characteristics of both quantitative and qualitative research and to gain an understanding of the respective assumptions, strengths and weaknesses. This broad understanding places the researcher in a position to consider a research design that will collect “multiple data using different strategies, approaches, and methods in such a way that the resulting mixture or combination is likely to result in complementary strengths and non-overlapping weaknesses” (Johnson & Onwuegbuzie, 2004, p. 18).

4.2.1 Quantitative Research

An assumption of quantitative research is that constructs such as reality, experience, and situation are quantifiable. Further, if a construct is measured,

validated and generalisable, then that construct may be generalised to similar populations or situations (Gall, Gall & Borg, 2003). Quantitative research seeks to understand the facts or causes of constructs, and relies on processes of objective verification. The subjective states of an individual or situation, and the subjective nature of the researcher's decisions made throughout the research process are not accounted for because reality is regarded as independent to personal experience (Onwuegbuzie & Leech, 2005). In this current study, objective verification alone would have been insufficient to address the multidimensional aspects of ethical understanding; however, this attribute of the qualitative approach was included within the mixed methods design. The long tradition of quantitative inquiry and extensive publication of quantitative data has resulted in the establishment of processes, templates, regulations and guiding principles that are available for researchers to consider and utilise in research design (Gall et al., 2003). Johnson and Onwuegbuzie (2004) regarded the strengths of quantitative research to be that it tests and validates constructed theories surrounding phenomena; the data collection process is efficient; data is accurate and numerical; and it allows for generalisability when data are drawn from appropriate random samples. Additionally, quantitative studies are essentially replicable and include rigorously tested instruments created to measure constructs that can be used validly and reliably in future social or educational contexts (Creswell, 2014). The quantitative measures used in this current study are examples of instruments that were created and adapted through iterative research processes to measure identified constructs

and then made available for future research. An additional strength of the quantitative approach is considered to be the absence of direct interaction between the researcher and participants during data collection. It was suggested by Gall et al., (2003), that the potential for responses or actions being influenced by the researcher is reduced when interaction does not occur. Researcher influence was considered carefully in this current study and decisions relating to data collection processes were based on minimising interaction with participants during the quantitative data collection activities.

A weakness of the quantitative approach in education research is that although quantitative data are commonly relied on by policy makers and during decision-making processes (Wright, 2006); an overreliance might lead to an emphasis on statistical significance without regard for the significance of the effects involved (Tashakkori & Teddlie, 1998). Another perceived weakness of a solely quantitative approach is that the technical representation of quantitative data is challenging for the non-specialist reader to understand (Burns, 2000). This difficulty could lead to a failure to convey the significance of the results, or to the misinterpretation of findings.

4.2.3 Qualitative Research

Creswell (2013), Hatch (2002), and Marshall and Rossman (2011) agreed that research projects featuring qualitative inquiry include some or all of the following characteristics: “natural settings”, “researcher as key instrument”, “multiple sources of data”, “inductive and deductive data analysis”, “participants’

meanings”, “emergent design”, “reflexivity”, and “holistic accounts” (as cited in Creswell, 2014, pp. 185-186). Several of these characteristics are featured within the design of this project. Focus groups took place within the natural context of the classroom and written reflections were completed as part of regular learning activities. As the sole researcher, I recognised my role as a key instrument in that I bore responsibility for analysing the data, developing descriptive codes for patterns in the data, and inductively generating themes that emerged from iterative analysis of text. Barrett (2007) regarded these processes as ‘transformations’ which “involve interpreting what the data mean, and relating these interpretations to other sources of insight about the phenomena, including findings from related research, conceptual literature, and common experience” and therefore, “the final research report reflects primary evidence of the phenomenon interwoven with the researcher’s reasoned interpretation of the phenomenon” (p. 418). The project design incorporated multiple qualitative sources of data including group interviews and written responses to text. The use of multiple methods facilitated broader interpretations and the identification of themes that spanned more than one data source. Including multiple sources supported the processes of inductive and deductive data analysis, as themes established from one source were used to examine another source and ascertain whether there was a need to collect “further or more specific information” (Creswell, 2014, p. 186). A further qualitative characteristic of the study was the intention to represent an accurate portrayal of participants’ meanings. Adopting an emergent design for data collection and

applying active reflexivity on research practices assisted in the production of accurate and multidimensional findings.

4.3 Case Study Design

Having decided on a parallel convergent, equal status design, I decided that a one-group pre-test post-test case study framework would provide the most appropriate approach for the inquiry. In a one group pre-test post-test design, participants are administered a pre-test on a dependent variable. Following the pre-test, all participants are exposed to the same intervention or experiment.

Participants are then administered a post-test on the same dependent variable. The t test for two dependent samples can be employed to determine if there is a significant difference between the pre-test versus post-test scores of participants. It is important to note that since this design lacks a control group, a one group pre-test post-test design does not allow a researcher to conclude that the intervention was responsible for a significant difference. When a one group pre-test post-test design is utilised, researchers cannot be certain that differences found are not from a variety of unaccounted for factors or confounding variables (Cohen et al., 2007). Confounding variables may include history, maturation, testing effect, and / or instrumentation effect (Slavin, 2007). The prospect of having results influenced by confounding variables was considered during selection of the research design and measures were taken to minimise the possibility. The likelihood of history and maturation effects was minimal due to the short duration of research activities. The influence of testing and instrumentation effects was reduced by limiting testing to

two administrations with no exposure to instruments between testing, and the collection and analysis of instruments by a single researcher. A further problem associated with interpreting findings from a one group pre-test post-test design is that researchers are unable to determine whether the differences noted on pre-tests and post-tests are more or less than what should have been expected (Slavin, 2007). The inclusion of instruments with previously established normative data resolved this problem.

Case study research was defined by Yin (2003) as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context especially when the boundaries between phenomenon and context are not clearly evident” (p. 13). Case studies are considered as empirical investigations, in that they are “based on knowledge and experience gained through the collection and analysis of data” (Yin, 2009, p. 18). Stake (2005) pointed out that a case study is not a methodological choice but rather a choice of the phenomenon to be studied. The term “case study” puts emphasis on what can be learned about a single case. This focus on the single case is echoed by Merriam (1998) when she talked about the difference between case studies and other types of research in that they are intensive descriptions and analyses of a single unit or a bounded system. The current study was bounded by time, participants and place, and can therefore be logically viewed as a single unit. By confining the area of a study to a small number of units, the case study researcher is able to focus in depth on the aspects of inquiry. Further, Baxter and Jack (2008) regarded a qualitative case study as "an

approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources. This ensures that the issue is not explored through one lens, but rather a variety of lenses ..." (p. 544). Using a variety of lenses in this current study allowed multiple aspects of the development of ethical understanding to be exposed and understood.

Case studies are a common approach in mixed methods research and provide a way to collect data to develop further understanding of a particular phenomenon or topic (Creswell, 2013; Stake, 2005). Where little theory exists in relation to a concept, case study research is considered an invaluable tool from which to build theory. In particular, case study research has the strengths of allowing for the construction of new understanding and producing theories that are empirically valid. It is also acknowledged that potential weaknesses also exist. In case study research, weaknesses include the development of overly complex findings from information-rich data, or the development of theory that is insufficiently broad enough to be of significance to a range of situations. An awareness of the existence of these weaknesses is important in reducing the potential impact on the research. Following thorough consideration for this particular study, it was concluded that the strengths of adopting a case study approach exceeded any potential weaknesses.

Two key approaches were drawn upon to guide the case study design; one proposed by Robert Stake (1995) and the second by Robert Yin (2009). Using both approaches ensures that the topic of interest is comprehensively explored, and that

the essence of the phenomenon is revealed. Both Stake (1995) and Yin (2009) based their approach to case study design on a constructivist paradigm. Constructivists claim that truth is relative and is dependent on each individual's perspective. As such, "this paradigm recognises the importance of the subjective human construction of meaning but doesn't reject outright some notion of objectivity" (Crabtree & Miller, 1999, p. 10). As constructivism is based upon the view that reality is a social construction, one of the advantages of using this approach in this study was that it fostered close collaboration and interaction between the participants and the researcher during the qualitative data collection process; this collaboration encouraged participants to respond openly and facilitated a deeper understanding of the participants' responses.

Adopting a constructivist orientation does not limit the inclusion of quantitative analyses within the research design. Utilising multiple paradigms and methods affords the researcher flexibility to apply either a quantitative lens or a qualitative lens whenever most appropriate at any particular stage, and to switch between lenses multiple times as required throughout the research process. According to Onwuegbuzie and Johnson (2006), this process of switching may reveal meta-inferences that "go beyond the provision of both traditional viewpoints by offering a third, well-informed viewpoint based on consideration of quantitative and qualitative thinking" (p. 59). Further, the inclusion of a combined approach using mixed analysis processes can contribute to the collection of richer data and

interpretations that “enhance description and understanding” of the phenomena (Johnson et al., 2007, p. 122).

4.4 Overview of Research Design

4.4.1 Data Collection

In mixed methods research, the data collection procedure consists of several key components: “sampling, gaining permissions, collecting data, and recording data” (Creswell & Plano Clark, 2011, p. 171). The selection of procedures regarding setting, participants, sampling procedures, sample size and recruitment were made in the knowledge that although there are no widely accepted typologies for mixed methods sampling strategies (Teddlie & Yu, 2007), all decisions should be based on the objective of using the appropriate methods to answer the research questions. In addition to this, there are decisions specific to the convergent design including; the selection of the two samples, the size of the samples, the design of the data collection questions and the format and order of the different forms of data collection (p. 180).

4.4.2 Sample

The design of this mixed methods case study was focused on gaining information-rich data rather than generalizable data; for this reason, a purposeful sampling strategy was selected.

4.4.3 Purposeful Sampling

Purposeful sampling involves the conscious selection of a particular sample for a defined purpose (Creswell & Plano Clark, 2011). Decisions relating to the

sample were based on recruiting participants most conducive to addressing the research questions. A review of the literature identified that the components of ethical understanding are multidimensional and that assessment of ethical understanding requires the consideration of multiple perspectives. To gather multiple perspectives of children's ethical understanding, the decision was made for the sample to comprise students, teachers, and parents. Given that the participant sample included students, teachers and parents, and that the purpose of this study was to investigate the development of children's ethical understanding within an educational context, the most appropriate setting for the study was considered to be a school. Additionally, the literature review indicated that existing instruments designed to measure aspects of ethical understanding require participants to have achieved independent literacy skills equivalent to an approximate reading age of 12 years old; therefore, it was decided that the minimum age for the student participants of the sample was 12 years of age (Year 7). As the research design included a four-week literacy program, it was necessary to recruit students from within a cohort who were able to attend designated literacy activities as a whole group for the entire four-week period. Further, it was felt that a mixed gender cohort would provide the opportunity to analyse, compare, and discuss potential differences in findings or perspectives based on gender.

Sample size was an important consideration in the design of this study. It was noted by Marshall and Rossman (2006), that although sample size is dependent on numerous factors and may be influenced by resources, location or

time constraints; the ultimate decision must be based on the purpose of the research. As is the case in this study, sample size in a case study is related to the approach taken and is typically small (Creswell, 2008). The selection of the sample population and the setting, which required a single cohort of students in one location, determined the initial limit for the sample size as the typical number of students in a Year 7 class in Tasmania ranges between 15 to 30 students.

Further decisions regarding sample size were based on the type and number of instruments being used, the amount of time available to conduct data collection, and the manageability of data analyses for a single researcher. For these reasons, the ideal sample size was estimated to be between 10 and 15 students. This number also factored in the inclusion of questionnaire data from one parent/carer of each student and questionnaire data from the students' teachers.

4.4.4 Setting

Having established the criteria for the sample and setting and subsequently gaining ethics approval (see Appendix A), 16 schools that met the criteria were identified. An expression of interest email containing details about the project and providing the research team contact details was distributed to each principal of the identified schools. The initial email was followed by telephone contact requesting to arrange a meeting between the researcher and principal to discuss the project in detail. Eight schools declined the request of a meeting and eight schools accepted the request. Meetings to discuss the project and invite participation were held at each of the eight school locations during regular school hours. At the initial

meeting, all research activities and materials were discussed, and clarification of the commitment and resources required was provided. In recognition of the demands of the research activities and the specific limits of the sample criteria, the possibility of the lack of availability of an appropriate cohort from which to recruit was anticipated. Each of the principals expressed significant interest in participating and agreed to give the proposal further consideration. Following the initial meetings, the principal of a Kindergarten-Year 10 Catholic college confirmed that a suitable cohort was available and granted permission to conduct research at the school subject to the agreement of the teachers of the selected cohort. Prior permission to conduct research in Tasmanian Catholic schools had been granted by the Catholic Education Office (see Appendix B) and the principal supplied the researcher with the contact details of two teachers responsible for a group of year 7 and year 8 students who attended a combined Literacy program.

4.4.5 Participants

The two teachers were contacted by the researcher via an email containing full details of this study and an invitation to participate. Both teachers replied to express their interest in participating and to organise a meeting. At the meeting, full details of the project were explained and both teachers agreed to participate. Following an explanation of the research activities, a study timeline of data collection procedures and research activities was discussed and a timetable was constructed to accommodate existing curricula and teaching activities. Information sheets were distributed and consent forms were completed. Both teachers shared

responsibility for a cohort of 18 year 7 and year 8 students who attended a Literacy program for three 50-minute periods each week. Prior to commencement of recruitment, the researcher attended the classroom to introduce the project and explain the research activities to the students. At the conclusion of the introduction, an information package containing the following materials was distributed to each of the 18 students:

- 1). Letter to parents and carers
- 2). Information Sheet for parents and carers (Appendix E)
- 3). Information Sheet for students (Appendix F)
- 4). Parent/carer Consent Form (Appendix G)
- 5). Parent/carer Consent Form for child to participate (Appendix H)
- 6). Student Consent Form (Appendix I)
- 7). GEM-PR questionnaire (Appendix J)
- 8). Return envelope

Signed consent forms were returned in sealed envelopes to the school office for collection by the researcher. Two teachers, 12 students and 12 parents and/or carers granted consent. Non-consenting students were informed that they would not take part in data collection or research activities and would continue with their regular timetabled activities. The group of student participants comprised three 12 year- old (1 x female, 2 x male) and nine 13 year- old (5 x female, 4 x male) individuals.

4.5 Data Collection Instruments

The research questions were addressed by employing a mixed methods approach to conduct a small-scale case study in a one group pre-test – post-test convergent parallel design. In the absence of comparative studies or existing frameworks addressing the specific focus under investigation, an investigative framework incorporating selected established quantitative instruments and purposely designed qualitative measures informed by the literature and created by the researcher was constructed. An overview of the investigative framework and a summary of the data collection and data analysis procedures and products are presented in Figures 4.2 and 4.4. The data collection instruments and procedures, and data analysis processes are described in sections 4.5, 4.6, and 4.7.

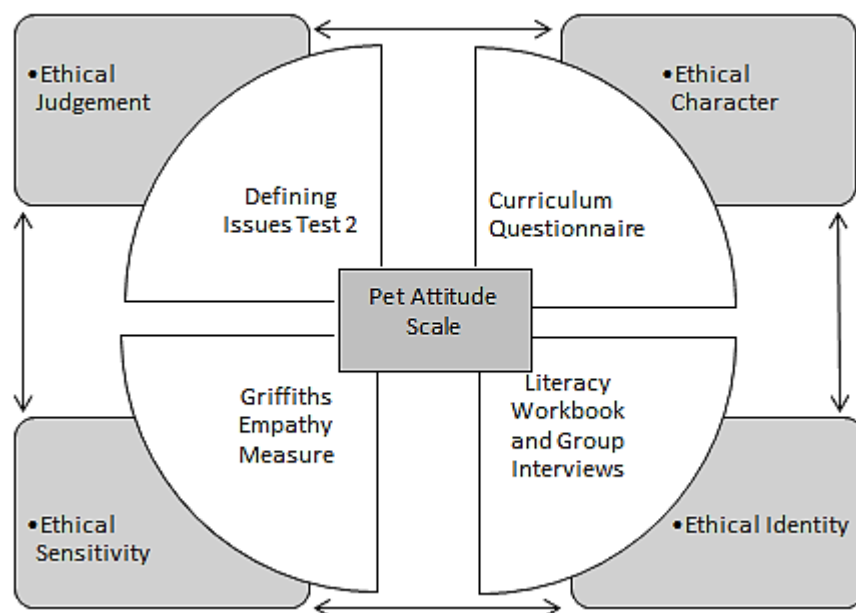


Figure 4.2. Overview of the investigative framework.

4.5.1 Measure for Ethical Judgement

The Defining Issues Test 2 (DIT-2)

The Defining Issues Test (DIT-2) was initially developed in the early 1970s as an instrument to measure moral judgement (Rest, Cooper, Coder, Masanz, & Anderson, 1974). The most recent version of the Defining Issues Test 2 (DIT-2) was created as an online version of the DIT and is available using SurveyMonkey or Qualtrix (see Appendix K for a sample of the questionnaire. A full version is available from the Center for the Study of Ethical Development). An additional feature of the DIT-2 is the option to gain permission from the CSED to modify the language, content, and format of the questionnaire to ensure the instrument is appropriate for the target audience. In the current study, an application for modifications to language and content was applied for and permission was granted (see Appendix L). The modified version of the DIT-2 remains the property of the CSED and becomes available for future researchers. A summary of the modifications applied to create the Australian Primary Version DIT-2 is provided in Figure 4.3.

Table 4.1.

Modifications Applied to the DIT-2 to Create the DIT-2 Australian Primary Version

	Current version	Requested changes
Title	Defining Issues Test 2-US version	Defining Issues Test 2-Australian Primary Version
Page 2	Sitting	Session
Page 3	Presidency of United States	Prime Minister of Australia
Story 2	Lieutenant Governor	Premier
Story 3	School Board District 190	School Board Northern Region
Story 5	Campus	University Campus
Additional spelling changes	Favor Realize	Favour Realise

Originally, the DIT measure was described as a paper and pencil alternative to Kohlberg's (1969) semi-structured interview measure of moral judgment development (Rest, 1979). As such, the primary focus of the measure was an assessment of the understanding and interpretation of moral issues. Consistent with the Kohlbergian model, Rest viewed moral judgment development as a social and cognitive construct that progressed from a self-focused view of moral issues, through a group-based moral perspective, to a reliance on post-conventional moral principles. Also consistent with Kohlberg, Rest viewed moral judgments as predominantly cognitive and a primary factor in the understanding of moral actions and emotions. Similar to Kohlberg's moral judgment interview, the DIT-2

uses stories to focus the participant on a moral dilemma. However, unlike the Kohlberg interview where an individual must produce a response, the DIT-2 is a recognition measure. On the DIT-2, participants are required to rate and then rank 12 short issue statements for each of five moral dilemma stories. These statements represent the defining features of the moral dilemma as viewed from each of Kohlberg's six-stages (Rest, 1979). Participants taking the DIT-2 read the story and then decide what action the character ought to choose. Following this action choice, 12 items are presented and rated in terms of importance on a five-point scale. Once rated, the participant is asked to consider the 12 items as a set and then rank the four items that best describe their understanding of how the character ought to solve the dilemma. The primary index of moral judgment development is derived from the four items ranked as most important. Rest et al. (1974) found that the DIT scores produced results that were consistent with theoretical expectations based on Kohlberg's model and supported Kohlberg's claim that moral judgment is developmental. Additionally, the scores produced by the DIT were able to distinguish groups of individuals who could reasonably be expected to differ on moral judgment development, were able to demonstrate that the measure was sensitive to educational interventions, and could be related to moral actions and choices. The development of the DIT-2 recognises that at any given time there are multiple moral conceptions available to the individual. Thus, appropriate measurement strategies must assess not only which conceptions are available, but also the preferred system. The DIT-2 is a schema-based model that represents

moral development as a progressively ordered set of schemas. These schemas define the network of knowledge that is organised around particular life events and exist to help individuals understand new information based on prior experiences (Rest et al., 1999). In this view, moral schemas are contextual, automatic, and less reflective than Kohlberg's stages. Furthermore, DIT-2 researchers explain that schemas may not be explicitly understood by the individual, and may operate at the tacit level; thus, the DIT-2 is considered as a device for activating moral schema. More specifically, the schemas measured by the DIT-2 are viewed as a default system that is evoked when other, more automatic and context-specific, interpretive systems fail or provide inconsistent information (Narvaez & Bock, 2002).

Scoring of the DIT-2 measures three distinct developmentally-ordered moral schemas. These schema are labelled: Personal Interests (combining elements of Kohlberg's descriptions of Stages 2 and 3); Maintaining Norms (derived from Kohlberg's definition of Stage 4); and Post-conventional (drawing from Kohlberg's Stages 5 and 6. Rest et al. (1999) described the focus of the Personal Interest schema as highlighting a perspective that focuses on the gains and losses each individual may personally experience within a moral dilemma. Within this schema, little or no attention is given to the broader social systems. When viewed from a Personal Interest perspective, the social world is a loosely connected network of moral considerations linking close relationships and individual interests. The Personal Interest schema is fully developed by the time participants

are able to reliably complete the original format DIT, typically defined as a 12-year-old reading age (Rest et al., 1999). The Maintaining Norms schema is representative of a perspective that views the moral basis of society as understood in terms of how cooperation can be organised on a society-wide basis. Reflecting the description of Kohlberg's stage 4, this schema is formed on an understanding of rules, roles and authority. More specifically, the Maintaining Norms schema has been defined as having the following characteristics: (a) a perceived need for generally accepted social norms to govern a collective; (b) the requirement that the norms apply society-wide; (c) the need for the norms to be clear, uniform, and categorical; (d) the norms are seen as establishing a reciprocity; and (e) the establishment of hierarchical role structures (Rest et al., 1999). In contrast to Kohlberg's view of the post-conventional stages, the DIT-2 describes the essential features of reasoning at the Post-conventional stage in more general terms. In this view, Post-conventional reasoning suggests all moral obligations are based on criteria that emphasise shared principles, are mutual, and are open to scrutiny (Rest et al., 1999). The main source of variance in the DIT-2 is provided by the differences between maintaining norms (conventionality) and post-conventionality. These differences are what Kohlberg (1969) regarded as the distinction between Stage 4 and Stage 5.

Scoring of the DIT-2 results in a P score that represents the participant's relative location on a developmental continuum. An increase in P score indicates that the participant's developmental location is shifting toward higher levels of

moral judgment development. Over recent years, the N2 index has also been developed and has become the primary index of the DIT-2. The N2 score uses the P score as a starting point and then adjusts the P score based on the participants' ability to discriminate between P items and lower stage items. The N2 score increases in a positive direction if the individual rates the post-conventional items as more important than the personal interest items, thus discriminating between high and low items. Similarly, N2 scores decrease when the participant does not discriminate between post-conventional and personal interest items or selects the personal interest items over the post-conventional items.

The DIT-2 also measures whether participants' are performing within a transitional or consolidated developmental phase (Thoma, Narvaez, Endicott, & Derryberry, 2001). The developmental phase indicators are based upon Snyder and Feldman's (1984) description of phases in development, and draws upon Walker and Taylor's (1991) application of the developmental phase notion within the moral judgment domain. Participants who produce a schema profile indicating minimal preference for stage-based items demonstrate a transitional phase, whereas, participants showing clear preferences are situated within a consolidated phase. The developmental phase is significant as it is related to the time it takes for individuals to arrive at decisions about moral issues. Individuals identified as being in the consolidated phase take longer to judge the moral issues, suggesting a deeper processing of these issues (Thoma et al., 2001). Further, Derryberry and Thoma (2005) found that developmental phase indicators moderated the link

between moral judgment and action. Identifying both the stage and phase of moral judgement development was of particular importance to the current study, as it contributes to assessment of ethical understanding. One feature of the DIT-2 that facilitates the measurement of developmental phase is the ‘undecided’ variable, which is an index of the decisiveness with which an individual selects action choices on the DIT-2. For each of the five stories on the DIT-2 the participant is provided with a ‘can’t decide’ option; the number of times that the participant selects this option is scored on a range from 0 to 5. The ‘undecided’ index is based on the view that indecision is in part a result of the ease or difficulty with which participants process moral information (Thoma, Bebeau, Dong, Liu, & Jiang, 2011).

Previous studies indicate that DIT scores were significantly related to measures of cognitive capacity and moral comprehension, to recall and reconstruction of post-conventional moral argument, to Kohlberg's measure, and to other cognitive developmental measures (Rest, 1986; Thoma & Rest, 1999). The instrument is used extensively to evaluate intervention programs. Rest (1986) described a review of over 50 intervention studies and reported an effect size for dilemma discussion interventions to be .41 (‘moderate’ gains), whereas the effect size for comparison groups was only .09 (‘small’ gains). As such, the DIT-2 was selected for use in this study as it has been demonstrated as sensitive to educational experiences intended to stimulate moral development.

4.5.2 Measure for Ethical Character

Ethical Understanding Curriculum Questionnaire (EUCQ)

The ethical character component of ethical understanding focusses on the development of the processes and skills necessary for effective moral action. Rest and Narvaez (1994) defined this component as relating to the character elements of “ego strength, perseverance, backbone, toughness, strength of conviction, and courage” (p. 24). Ethical character involves the capability to construct and implement actions to achieve the moral outcome, and emphasises the processes by which an individual undertakes an appropriate course of action, avoids distractions and maintains the courage to continue. The Australian Curriculum general capability, Ethical Understanding includes a learning continuum across all year levels that outlines the expected level of student achievement of the recognised elements of ethical understanding including: Understanding ethical concepts and issues; Reflecting on personal ethics in experiences and decision making; and Exploring values, rights and ethical (ACARA, 2013). Among the recognised elements are indicators of behavioural traits that contribute to the assessment of ethical character. As teachers are practised at teaching and assessing outcomes from the Australian Curriculum, the decision was made to gain teachers perceptions of students’ ethical character through the use of an assessment questionnaire derived from the elements of the Australian Curriculum general capability, Ethical Understanding. The EUCQ (see Appendix M) was developed by the researcher as a 16-item Likert format teacher-report instrument using the

Ethical Understanding Learning Continuum Level 5, which is the level of achievement typically reached by the end of year 8 (ACARA, 2013). Teachers were requested to assign each student a score ranging from 1-5 for each indicator based on their observations of the student's level of achievement according to the continuum of learning.

4.5.3 Measure for Ethical Identity

Animal Studies Literacy Program (ASLP)

The ASLP design including duration, intensity, content and delivery was informed by previous evaluations of school-based humane education programs (Ascione & Weber, 1996; Hein, 1987; Malcarne, 1983). Such studies indicated that humane education programs that ranged between eight hours to 40 hours duration, and were delivered by a trained educator over a period of between 4 to 10 weeks, were most likely to influence student achievement of the aims of humane education. On that basis, the ASLP design for this current study required students to participate in reading and writing activities for a minimum of 8 hours duration over a four-week period. Students completed the ASLP activities individually at their own pace during the scheduled 50-minute literacy period, three times each week. Each period involved students reading sections of the selected novel and completing written reflection activities in response to the text. This flexible format was designed to cause minimal disruption to established learning activities and to facilitate accommodation within existing timetabling and

curricula. The ASLP was initially introduced by the researcher and the classroom teachers supervised the subsequent learning activities.

Although humane education programs (HEP) involving interactions with, or including the presence of, live animals have been more widely researched than HEP that exclude live animals, and thus more of a consensus regarding HEP efficacy reached (Nimer & Lundahl, 2007), several researchers have questioned the effect that HEP might have on the animals involved; arguing that the human-derived benefits may not compensate the negative impact on the animals (Hatch, 2007; Serpell, Coppinger, & Fine, 2000). Given that the aim of the majority of HEPs is to promote compassionate attitudes and behaviour, any potential for negative effects on the animals involved is of utmost importance and requires consideration. For this reason, a literature-based Animal Studies program was selected as more appropriate for this study than one involving direct interaction with live animals. Although scant assessment of the relative efficacy of animal-present vs. animal-absent HEP has occurred, a study by Arbour et al. (2009) demonstrated that a literature only HEP resulted in significant changes in students' empathy levels (p. 149). Teaching humane education through literature is an established practice; likewise, teaching children values through literature has been a feature of numerous approaches to moral education and the use of literature as a form of direct moral instruction was evident in early formal character education strategies (Leming, 1997). However, studies by Narvaez, Gleason, Mitchell, and Bentley (1999) suggested that simply reading stories to children does not

guarantee that they will understand the intended moral messages and increasingly, teaching methodologies have focused on broader uses of literature in moral development (p. 482). Research by Narvaez, et al (1999) investigated the mediating influence of developmental differences on moral theme comprehension, and Leming (1997) examined the use of literature as a character education strategy for development of moral knowledge, moral commitment and moral action.

Further, approaches to character education such as those used by the Child Development Project (CDP) utilised literature in a multi-dimensional approach for improving children's cognitive-social problem-solving skills, and for developing positive resolution strategies for use in problem situations (Soloman, Watson, Delucchi, Shaps, & Battisch, 1998).

The structure and content of the ASLP (see Appendix N) was designed to reveal aspects of ethical identity. This was achieved through the selection of a children's novel that addressed the ethical elements included within the Australian Curriculum general capability, Ethical Understanding. The chosen novel was *Wringer*, written by the Newberry Medal winning author Jerry Spinelli (2004). *Wringer* is the story of a nine-year-old boy who must choose whether to take part in a violent act of animal cruelty. The novel and accompanying literacy workbook assessed students' ability to recognise ethical concepts, presented opportunities to explore ethical concepts in context, encouraged students to reason and make ethical decisions, and required consideration of consequences for ethical actions. Additionally, the story provided opportunities for students' to reflect on ethical

action, examine values, explore rights and responsibilities, and consider points of view. The literacy workbook created by the researcher, included 26 questions, divided into eight sections. Students were required to read the relevant section of the book and to write answers to the corresponding questions in the space provided. Each section of the workbook included a collection of questions strategically designed to assess each student's comprehension of the text and to reveal insights into their ethical identity.

4.5.4 Group Interviews

Semi-structured group interviews were selected as a method of gaining insight into students' understanding of the aims of moral education, the role that animals might play in their own development of ethical understanding, and their perceptions of educational experiences designed to assist in the realisation of education for the promotion of ethical understanding education aims. May (2001) regarded semi-structured interviews as potentially the most effective method of revealing insights into experiences, opinions and attitudes of relevant individuals. Similarly, O'Leary (2004) recommended a semi-structured technique as appropriate for obtaining structured answers to previously planned and defined questions whilst also allowing a degree of flexibility to explore interesting issues or observations that may arise during the interview. The interview schedule consisted of four main questions and seven sub-questions designed to address each research question (Appendix N). It was noted that additional considerations relating to the suitability of the interviewer and the interview location are required

when interviews involve children (Silverman, 1993). Although any interview may be viewed as a contrived social situation with an asymmetric relationship between the interviewer and the interviewee (Powney & Watts, 1987), Amato and Ochiltree (1987) pointed out that the dynamics of interviewing children are different from those of interviewing adults and that consequently; interviewers working with children require prior experience with children in the focus age range. For this reason, the group interviews were conducted by the researcher (a qualified teacher), in the presence of the classroom teacher and within the students' regular classroom.

4.5.5 Measure for Attitudes Towards Animals

The Pet Attitude Scale - Modified (PAS-M)

As discussed in the literature review, studies have found that it is the degree to which a person is attached to a pet, rather than simply owning a pet, that correlates with their level of empathy towards animals (Daly & Morton, 2003). The PAS-M (see Appendix O) is an 18-item Likert format self-report instrument that assesses the extent of children's positive attitudes towards pets (Munsell, Canfield, Templer, Tangan, & Arikawa, 2004). The scale represents three factorially derived subscales: love and interaction, pets in the home, and joy of pet ownership. Development of the scale demonstrated meaningful correlations with the Eysenck Personality Inventory, the Allport-Vernon Lindsey Study of Values, and the Personality Research Form (Munsel et al., 2004). Subsequent research has extended the construct validity of the PAS and contributed to further knowledge

about attitudes towards pets in a range of areas. For example: Schenck, Templer, Peters, and Schmidt (1994) found that the PAS scores of American adolescents correlated with those of their parents; Planchon and Templer (1996) and Planchon, Templer, Stokes, and Keller (2002) found that persons who experienced high levels of grief after the death of a pet had higher scores on the PAS; Maroi (1984) reported that 'loneliness' correlated positively with the 'joy of pet ownership' factor of the PAS and negatively with the 'love' and 'interaction', and 'pets in the home' factors; Jenkins (1986) used the PAS to determine positive attitudes toward therapy dogs that participants stroked to lower their blood pressure; and Hama, Yogo, and Matsuyama (1996) found that adults with higher scores on the PAS had greater reduction in the mean arterial pressure and systolic pressure when interacting with horses. The PAS also correlates positively with childhood animal bonding (Brown, 2000).

The PAS-M is a modified version of the original Pet Attitude Scale (PAS), which was worded in a manner that assumed pet ownership, for example; "house pets add happiness to my life". Modification of the PAS consisted of adding the qualifier; "or would if I had one" to provide greater relevance to participants who do not own a pet at the time they complete the questionnaire (Munsell et al., 2004). Scoring of the PAS-M results in the subject's Pet Attitude Score in a range between 18 and 126. The higher the Pet Attitude Score, the more positive the subject's feelings are towards animals. Gender differences in attitudes towards animals have been reported; for example, Bjerke, Odegardstuen, and Kaltenborn

(1998) reported that females are more pet-orientated and have more positive attitudes towards certain animals, such as horses, than males; whereas males have more positive attitudes towards wild animals. Similar preferences were reported in Kindergarten children (Borgi & Cirulli, 2015). Scores obtained through the use of the PAS-M identify differences in gender attitudes among the study sample.

4.6 Data Collection

A convergent mixed methods design involves the separate analysis of the collected quantitative and qualitative data, and the subsequent merging and interpretation of the data. The procedures used for data collection as they relate to each instrument are described in this section. Prior to data collection, participants were assigned codes. Assigned codes comprised a letter to represent the participant status (e.g., S001 represents a student, T1 represents a teacher). To achieve participants' anonymity the name of the participating school has been withheld, characteristics unique to the school such as educational programs have been renamed, and codes have been provided and used throughout the thesis to protect the identity of the school, students, parents, and teachers involved in this study.

GEM-PR

A paper-based version of the GEM-PR was selected as the most appropriate format for this study. A paper-based format was chosen in preference to the alternatives of an electronic version distributed directly via email to parents or to an online survey format, as it eliminated concerns regarding having access to parents email addresses and the potential reluctance of parents to be involved in an

online study due to concerns of privacy or because of limited technological skills, both of which were considered likely to increase the risk of a low response rate (Burns, 2000). To maximise the response rate, the GEM-PR was distributed to parents as part of the comprehensive information package given to students, which included instructions for completion and a letter of appreciation. The GEM-PR was completed by one parent/carer of each student and returned in a sealed envelope with the signed consent forms for collection by the researcher from the school office.

Group Interviews

The group interviews with students were conducted on the first day and the final day of the data generation activities with a period of four weeks between each group interview. The group interviews took place within the classroom, with each session lasting for approximately 30 minutes. An interview schedule (see Appendix P) was developed for the group interviews to ensure there was consistency between questions, sequence, content, language, and meaning of questions. Each session began with a welcome, a self-introduction by the researcher, an outline of the aim of the interview and an invitation for the students to introduce themselves. The purpose of the self-introductions was twofold, to encourage a relaxed environment and to record each student speaking their own name to assist in accurate transcription of the recorded interviews. As suggested by Lankshear and Knobel (2004), the interview schedule commenced with a non-intimidating question for the purpose of engaging the participants in the interview

process and encouraging a sense of familiarity with the interviewer. Interview data were recorded using two digital voice recorders. The small size and silent operation of digital voice recorders used in this study minimised any possible intrusion or disruption. The advantages of using a digital voice recorder are the ability to obtain an accurate and complete record of what was spoken (Gay, 1996), and the capacity to transfer recorded files to additional electronic devices in order to facilitate transcription and ensure secure storage of voice files. To minimise the risk of device malfunction or failure, two digital voice recorders were used. Within 24 hours of each group interview, recorded voice files were transcribed verbatim into a Microsoft Word document and stored on a password-protected computer. The identities of the interviewees were protected using an alphanumerical code as described in section 4.6.

Member checking was carried out to ensure that transcripts were an accurate account of the group interviews, and contained the essence and meaning of the original interviews. The researchers' interpretations of the data were shared with the student participants and they were given the opportunity to discuss and clarify the interpretation, and contribute new or additional perspectives relating to the aspects of inquiry. Creswell and Plano Clark (2007) recommended the use of member checking for increasing validity. Additionally, Lincoln and Guba (1985) suggested that the process increased credibility and trustworthiness. Member checking was carried out after each group interview. Students were presented with one transcript of the entire group interview and a separate transcript containing

only their own responses to the interview questions. Providing the separate account of each student participant's responses facilitated a thorough member checking process. It was recognised that it is not possible to guarantee anonymity for focus group interviewees (Roberts-Holmes, 2005); however, confidentiality for interviewees was sought by requesting that all students keep their peers identities and opinions in confidence. Further, anonymity for data reported were assured and maintained by presenting the findings using alphanumerical codes, thereby eliminating the likelihood of participant identification (Burns, 2000).

DIT-2

Student participants completed the DIT-2 as a whole-group pre-test and post-test activity. The activity took place in the classroom and lasted for the duration of 50 minutes. As the DIT-2 online version using SurveyMonkey was used, it was required that each student participant was simultaneously able to access a computer, connect to the internet and access the SurveyMonkey website. Arrangements were made during the initial teacher meeting to reserve access to 13 laptops available from the school's ICT resources for the designated times and dates scheduled within the research activities timetable. Prior to commencing the DIT-2, student participants collected the laptops from the ICT storage room, followed the usual start up procedure to log into their Department of Education account, checked the Laptop battery was fully charged and connected to the internet. Participants were assured that by using the individual codes allocated to them prior to the commencement of data collection processes, their identity would

be protected. An additional laptop and data projector were used by the researcher to display the SurveyMonkey website on the screen at the front of the classroom. Verbal instructions were given to the participants on how to complete the questionnaire, and visual demonstrations of example questions were given to ensure each participant understood how to complete the task, how to ask for assistance if required, and what to do after they had finished the questionnaire. Participants were then instructed to complete the first question of the survey, which required the participant to enter an identity code. The researcher checked that each participant had entered his or her code correctly before permission was given to commence the questionnaire. The researcher and the classroom teacher remained present throughout the completion of the questionnaire to observe correct procedures and offer assistance if necessary. All participants completed and submitted the DIT-2 within 50 minutes. The researcher thanked the students for participating, asked if there were any questions and explained what would happen next. The completed DIT-2 questionnaires submitted to SurveyMonkey were converted to a data file prior to being emailed to the Ethical Development Centre for scoring. The scores were returned to the researcher as a data file and securely stored on a password-protected computer.

EUCQ

The paper-based curriculum questionnaire was completed individually by each teacher pre-test and post-test, within the classroom at the same time as student participants were completing the DIT-2. The questionnaire was given to

each teacher, completed and returned directly to the researcher. The scores from each questionnaire were recorded onto a Microsoft Excel spreadsheet and stored on a password-protected computer. Hard copies were stored in a locked storage cabinet.

PAS-M

The paper-based PAS-M questionnaire was completed by students as a whole-group activity pre-test and post-test with a period of four weeks separating each test. The activity took place in the classroom and lasted for the duration of 15 minutes. Questionnaires were distributed to the participants by the researcher. The researcher gave verbal instructions and identical written instructions were included on the front page of the PAS-M. The researcher and one classroom teacher were present during the activity to ensure correct procedures and assist if necessary. All participants completed the activity within 10 minutes and questionnaires were collected by the researcher. Scores were calculated from the hard copies, entered into a Microsoft Excel spreadsheet, and stored on a password-protected computer. Hard copies were retained and stored in a locked cabinet.

ASLP

The literacy program was introduced to the whole group after the completion of the pre-test quantitative instruments. Student participants were given a copy of the book *Wringer* and the literacy workbook. The researcher provided a verbal introduction to the book and an explanation of the workbook. Students were given time to explore the materials and ask questions. Instructions were given to

complete the first page of the booklet which required students to write their name and year level. It was explained that this information was required only for the purpose of identifying whom the booklet belonged to in case of loss and that when the booklets are completed and returned to the researcher they will be assigned with the student's code number and the first page will be removed to retain each student's anonymity.

4.7 Data Analysis

Within the mixed methods methodology, analytic procedures vary depending on which of the six design types is used. For the convergent parallel design, Creswell and Plano Clark (2007) advised performing a concurrent two-stage data analysis. In this frequently used approach, researchers report statistical results and then “follow it up with specific quotes or information about a theme that confirms or disconfirms the quantitative results” (Creswell & Plano Clark, 2007, p. 140). In the first stage, initial data analyses were completed for each of the qualitative and quantitative data sets. The qualitative group interview data were analysed and coded into categories and separated into individual responses to each question. In the second stage, the data sets were merged in order to provide a complete picture of the investigation. One of the methods of merging this data, and the one used in this study, is comparison through discussion.

4.7.1 Quantitative Analysis

The pre-test and post-test results for the GEM-PR, EUCQ and PAS-M questionnaires were calculated by hand, and recorded as numerical item scores.

The pre-test and post-test DIT-2 data were scored electronically by the Ethical Development Centre and returned to the researcher as an SPSS data file. SPSS software was used to create case summaries displaying results for each measure and each student. Paired t tests were performed on pre-test and post-test data to compare changes in mean values. Recognising that the robustness of t tests for small samples is dependent on the absence of strong skewness and outliers, histograms were created for each set of data to assess Normality and ensure the usefulness of the t test procedures. The small sample size was also taken into account during analysis of the effects of the ASLP on the results of post-test measures. Hedge's g value calculations were performed to measure effect value of the ASLP; however, the researcher was aware of the possibility of effect size being overstated and the implications this may have for reliability.

4.7.2 Qualitative Analysis

Group Interviews

Digital voice recordings were transcribed by the researcher and recorded as Microsoft Word documents. The decision for the researcher to transcribe the group interviews personally was based on the desire to become fully immersed and conversant with the data and to experience insights as they were revealed (Richards & Morse, 2007). In order to reduce the potential for misinterpretation, the transcripts initially consisted of verbatim accounts of each interview. Subsequently, edited transcripts were also recorded. Oliver, Serovich, and Mason (2005) described the difference between verbatim and edited transcripts and

explained that there were “two dominant modes: naturalism, in which every utterance is transcribed in as much detail as possible, and denaturalism, in which idiosyncratic elements of speech (e.g., stutters, pauses, nonverbals, involuntary vocalizations) are removed” (pp. 1273-1274). A denaturalised format was selected in this study as it was considered to enhance the fluency of the participants’ responses and reduce linguistic distractions for the reader. This decision was consistent with Wolcott’s (1994) advice to edit words as necessary to “help readers read and to put informants in the best possible light” (p. 66).

Data analysis of group interviews was achieved through the process of qualitative content analysis of transcribed interview responses. Content analysis involves the process of coding, categorising, comparing and drawing conclusions from the data provided in language and linguistic features of text (Cohen et al., 2007). The process is considered by May (2001) to be particularly suitable in the study of perceptions of phenomena due to the process of deconstruction, interpretation, and reconstruction of text which enables the researcher to reveal tendencies, sequences and relationships between the data which is relevant to the particular study. The content analysis process revealed emergent themes and sub-themes, which were compared and categorised for presentation as results, and discussed in relation to the literature and the research questions. The process of subsequently organising and coding the transcriptions offered a further opportunity to gain a deep understanding of the accumulated data. Creswell (2008) described coding as “the process of segmenting and labelling text to form descriptions and

broad themes in the data (p. 251). In this study, the coding process involved the initial identification of text segments relevant to the aspects of inquiry, and the allocation of code words or phrases to indicate a theme or category.

ASLP

The ASLP literacy workbook was designed to assess students' ability to recognise and comprehend ethical contexts and concepts, and to reveal insights into their perceptions of ethical identity. Analysis of students' responses to the questions was achieved using the process of content analysis. The insights gained through the content analysis were then used to compare and contrast students' levels of ethical identity to the results of the other quantitative and qualitative measures.

4.8 Summary of Data Collection and Data Analysis Procedures and Products

An overview of the procedures and products involved in the data collection and data analysis processes is illustrated below in Figure 4.3.

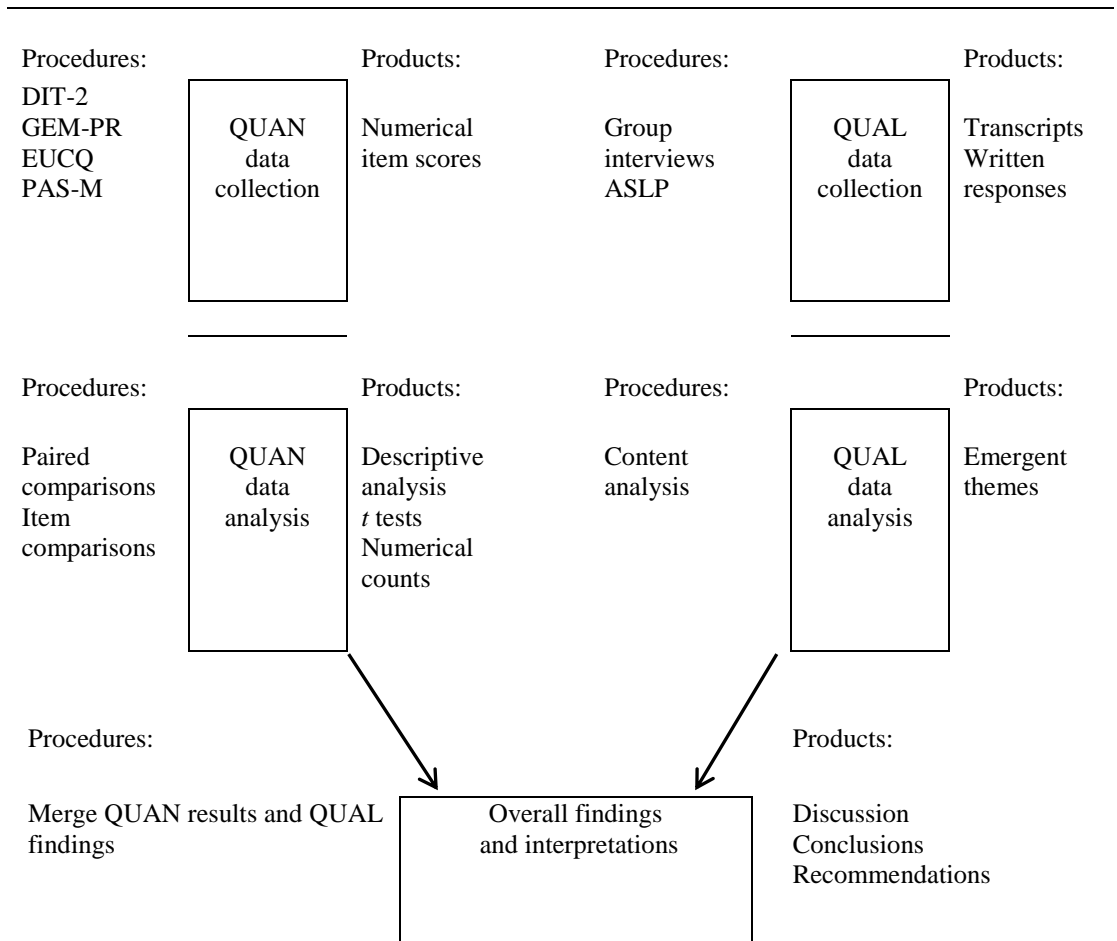


Figure 4.3. Overview of case study data collection and data analysis procedures and products.

4.9 Ethical Considerations

This study was carried out subject to approval from the Tasmania Social Sciences Human Research Ethics Committee (SSHREC) and was conducted fully within the conditions of the National Statement on Ethical Conduct in Human Research (Australian Government National Health and Medical Research Council, 2007). Prior to the commencement of this study, a full ethics application was submitted to the SSHREC and the research project was granted ethical approval

(Ref No. H0013094. See Appendix A). As the participating school was a Catholic College, permission to conduct research at Catholic schools was sought from and granted by the Catholic Education Office (see Appendix B). The decision to include methods of data collection that involved focus groups and the direct personal contact between the researcher and participants during the distribution and completion of quantitative instruments required the consideration of ethical concerns that are specific to qualitative studies. Patton (2002) provided a comprehensive framework identifying 10 key ethical issues within qualitative aspects of research projects including explaining purpose, promises and reciprocity; risk assessment; confidentiality; informed consent; data access and ownership; interviewer mental health; seeking advice; boundaries for data collection; and ethical versus legal issues. The manner in which these key ethical issues were addressed in this research are described respectively. The purpose of the research was clearly articulated to the principal and all individuals involved in the study. In relation to promises and reciprocity, all information provided about the study clearly identified that participants may not directly benefit from the research but the results may inform others through the publication and dissemination of the contents of this thesis and that the information may be used for beneficial purposes in the future. An assessment of the risk relating to the individuals involved was conducted prior to commencing the research and this project was considered low risk. Assurance of confidentiality was given to participants by explaining that all information would be provided in a format that

would not identify individuals. Participants were allocated codes to identify their role (teacher, student, parent/carer) and their relationship (parent/carer of particular student). The same codes were used for pre-test and post-test data.

Digital audio files and transcripts of teacher interviews were labelled with the code number. Hard copies of transcripts were stored in locked cabinets accessible only by the research investigators. Computer files were stored on a password protected secure server and files linking participant names and codes were stored separately from the data. It was made clear to all individuals that their decision to participate in this study was voluntary and they were free to withdraw their consent at any time without explanation or effect, and that prior to the date stated on the consent form that they could request that any data supplied by them be withdrawn from the research. When providing instructions and explaining the study on information sheets, language and format appropriate to the targeted audience (teachers, parents and students) were used. Data access and ownership was considered as an ethical issue for this study. In line with SSHREC requirements, all hard copy data were stored in a secure location and each participant was offered the opportunity to request a copy of the final report on this study. The possibility that reflecting upon issues and concerns relating to animals might have caused anxiety for individuals was noted, and participants were provided with contact details of the free counselling service available through the Catholic Education Office.

4.9.1 Issues of Representation and Legitimation

Two critical issues associated with qualitative research are the “dual crises of representation and legitimation” (Denzin & Lincoln, 2000, p. 898). The crisis of representation refers to the practice of writing about and representing the social world. The crisis of legitimation questions traditional criteria used for evaluating and interpreting qualitative research, involving a rethinking of terms such as validity, reliability, and objectivity. Questions raised by traditional notions of legitimacy pose problems when applied to constructivist forms of research because the traditional concept of validity relates to positivist and post-positivist ideas of the nature of truth and what counts as valid knowledge. The requirement that a research account should “report the truth about an objectively described state of affairs” does not address the concerns of constructivist research (Eisner & Peshkin, 1990, p. 97). Mishler (2000) described the “prevailing conception of and procedures for validation as based on an experimental model whereas qualitative studies are designed explicitly as an alternative to that model, with features that differ markedly and in detail from those characteristic of experiments” (p. 120). According to Mishler (2000), it is the responsibility of the researcher to ensure that the research methods and procedures of the study are visible so that the reader is “able to make a reasoned and informed assessment about whether or not the validity claims are well warranted” (p. 130).

4.9.2 Trustworthiness

Trustworthiness relates to the visibility of procedures and the overall coherence of design and analyses. Eisner (1991) referred to structural corroboration as the practice of “relating multiple types of data to support or contradict the interpretation and evaluation of a phenomenon” and suggests it as a means to assessing coherence (p. 10). Structural corroboration may be seen as a qualitative alternative to triangulation in quantitative research where the traditional concept is to collect evidence for the purpose of arriving at a non-refutable coherence or correspondence with an objective truth. The visibility of methods in this study was intended to increase the authenticity of the research and contribute to trustworthiness.

4.9.3 Validity and Credibility

When designing and implementing a case study project, several considerations are needed to ensure the validity or credibility of the work and to enhance trustworthiness. Yin (2009) emphasised the importance in case study design, of selection of sampling strategies and data collection, and management and analysis processes that are appropriate to clearly articulated research questions. Creswell (2014) suggested numerous strategies that promote data credibility and are appropriate for case study design. Three of the suggested strategies have been employed in this study: triangulation of data sources; multiple data types as a primary strategy to support the gathering of multiple perspectives; and member checking, where the researchers’ interpretations of the data are shared

with the participants and the participants are given the opportunity to discuss and clarify the interpretation, and contribute new or additional perspectives on the issue under study (pp. 201-202). Additional strategies commonly integrated into qualitative studies to establish credibility include the use of reflection, the maintenance of a research journal and peer examination of the data (Ahern, 1999). Keeping self-reflective journals is a strategy that can facilitate reflexivity, whereby researchers use their journal to “examine personal assumptions and goals and clarify individual belief systems and subjectivities” (Ahern, 1999, p. 408). In addition to including these strategies in this study, additional measures were implemented to address, minimise or resolve issues of representation, legitimisation, validity and trustworthiness. Steps were taken to ensure that all findings were presented as accurate and authentic accounts; explicit reference was made to the fact that the study did not seek to reveal an objective truth; validity was enhanced through visibility of methods and procedures, and trustworthiness was strengthened by the considered selection and correct execution of multiple methods, and the analyses of multiple data sources.

4.10 Summary of Chapter 4

This chapter has presented the important methodological concerns considered in this mixed methods research study. It has outlined the sample and setting that have been utilised in this research inquiry, as well as defining the parameters of the research activities. The research questions that have guided this study have been clearly stated and it has been demonstrated how they align to the

study. An outline of the investigative framework was provided in Figure 4.2 and an overview of data collection and analysis procedures and products were presented in Figure 4.4. The remaining chapters expand on the study, with the following chapter detailing the results and presenting the findings of the data analyses.

CHAPTER 5

FINDINGS

The preceding chapter provided an overview of the research approach and research questions, and discussed the ethical considerations related to this study. The study sample, the data collection instruments, and data analysis techniques were described, and the framework used for the processes of data collection, analysis and reporting were illustrated in Figure 4.4. Previously, the review of professional, scholarly, and curricular works in Literature Review Part A generated a summary of the four aims of education for the promotion of ethical understanding (subsection 2.7.1). Next, in order to address the first research question, Literature Review Part B examined current understandings of human-animal relationships and prevalent approaches to the use of animals in an educational context to produce a summary of the aims and outcomes of animal-focused educational strategies (Table 3.1). This chapter presents quantitative and qualitative data obtained from questionnaires, focus group interviews, and the ASLP activity to address research questions 2 and 3. The first stage of the process involved the analysis of the individual measures for the dimensions of ethical judgement (DIT-2), ethical sensitivity (GEM-PR), ethical identity (ASLP), ethical character (EUCQ), and attitudes towards animals (PAS-M) for the sample as a whole. The second stage involved the identification of patterns or correlations between each of the instruments to establish possible influence or effect. The final stage consisted of the analysis of each participant's results for the six measures for

the purpose of identifying the extent to which human-animal relationships play a role in the development of ethical understanding in children (RQ2), and how the inclusion of curriculum-based Animal Studies can contribute to the aims of education to foster the promotion of ethical understanding (RQ3).

5.1 Ethical Judgement

The ethical judgement dimension emphasises the selection process of choosing one action over another. This skill is concerned with thinking through recognised ethical challenges and determining a preferred course of action. A higher level of ethical development is considered to exist when more mature systems of reasoning are used as justifications for actions, even when engaging in the same action that could be justified by lower reasoning. In this study, the principal instrument used to obtain a quantitative measurement of participants' level of ethical reasoning was the Defining Issues Test – 2 (DIT-2). The DIT-2 is a restructured version of the original DIT devised in 1974 to measure three levels of moral judgement according to Rest's (1986) Four Component Model. Compared to the original DIT, the DIT-2 features a simplified format, has modernised stories, and applies subject reliability tests in order to retain more participants. The correlation of the DIT with DIT-2 is .79, which is similar to the test-retest reliability of the DIT. The DIT-2 includes five hypothetical moral dilemmas, each followed by 12 issues that could be involved in reaching a decision about the dilemma. Participants rate each issue and choose the first, second, third, and fourth

most important issues for each of the five dilemmas before selecting which decision they would make in each moral dilemma. Subject to approval from the Center for the Study of Ethical Development, the online format of the DIT-2 allows for the modification of language or content to suit the intended participants (see Appendix J) for the online version of the DIT-2 used for this study). The results of the test provide the following scores (Bebeau & Thoma, 2003):

Table 5.1

Summary of Defining Issues Test (DIT-2) Scores

Stage 2/3 Score	Personal Interest Schema Score: this score represents the proportion of items selected that represent considerations from Stage 2 (focus on the personal interest of the actor making the moral decisions) and Stage 3 (focus on maintaining friendships, good relationships, and approval).
Stage 4P Score	Maintaining Norms Schema Score: this score represents the proportion of items selected that represent consideration from Stage 4 (focus on maintaining the existing legal system, roles, and formal organizational structure).
P Score	Post-conventional Schema Score: this score represents the proportion of items selected that represent considerations from Stage 5 (focus on appealing to majority while maintaining minority rights) and Stage 6 (focus on appealing

	to intuitive moral principles or ideals).
N2 Score	New Index Score: this score represents the degree to which Post-conventional items are prioritized plus the degree to which Personal interest items receive lower ratings than the Post-conventional items. This score is adjusted to have the same mean and standard deviation as the P score to allow for comparisons.
U Score	Utilizer Score: This score represents the degree of match between which items the participants rated as most important and what decision participants say they would make in the moral dilemma.
Hum/Lib Score	Humanitarian/Liberalism Score: this score represents the number of reported decisions for the moral dilemmas that match those chosen by a group of “experts” (professionals in the field of political science and philosophy). Scores range from 0 to 5 out of the possible 5 moral dilemma decisions that can match.
Religious Orthodoxy score	Religious Orthodoxy Score: this score represents the sum of the rated importance and rank for one specific item from the Cancer moral dilemma that evokes the notion that only God can determine whether, or not someone should live or die.

The available scores with most relevance for this current study were the Stage 2/3, Stage 4P, P score, N2 and U scores. The P score represents the participant's relative location on a developmental continuum; a decrease in stage 2/3 and stage 4P scores when combined with an increase in P score indicates that the participant's developmental location is shifting toward higher levels of ethical judgement development. The N2 score uses the P score as a starting point and then adjusts the P score based on the participant's ability to discriminate between P items and lower stage items. The N2 score increases in a positive direction if the individual rates the post-conventional items above the personal interest items, thus discriminating between high and low items. Similarly, N2 scores decrease when the participant does not discriminate between post-conventional and personal interest items or selects the personal interest items over the post-conventional items. The U score is high when the participant is unable to recognise the reasons used to reach the selected moral decision. The score decreases when the participant is able to identify the logical reasons for reaching a moral decision. The DIT-2 was completed by the participants using SurveyMonkey.com. Compiled data were collected by SurveyMonkey.com as individual survey files and as a numeric summary. The data file was emailed to The Center for the Study of Ethical Development (CSED) where descriptive statistical analyses were performed and data were compiled into a format conducive to further analysis before being returned as a data file to the researcher. Data was then prepared for

inferential statistical analysis using Statistical Package for the Social Sciences v21 software (SPSS v21) based on the variables. The dependent variable was the level of ethical judgement as indicated by the DIT-2 scores. The independent variables were pre-test and post-test administrations of the DIT-2. An independent sample *t*-test was performed to test the means of the pre-test and post-test scores. Two one-sample *t*-tests were conducted on the sample group and the norms scores provided by CSED. Finally, paired samples *t*-tests were conducted on the sample groups for the comparison of gender and age group variables. Cronbach's alpha of .05 (for one sample *t*-tests) and .025 (for paired samples *t*-tests) were chosen.

5.1.1 DIT-2 Mean Scores

The first results reported are the mean scores for Stage 2/3, Stage 4P, P, and N2 scores. The scores for each administration were first analysed as independent samples and compared to DIT-2 norms. Pre-test and post-test results were then analysed and compared to identify differences. Table 5.2 presents pre-test and post-test means and standard deviations for each of the four DIT-2 scores.

Table 5.2

Comparison of Pre-Test – Post-Test DIT-2 Mean Scores

Score	Pre-test (N = 12)		Post-test (N = 11)		t	Sig	g
	Mean	SD	Mean	SD			
Stage 2/3	37.66	12.14	38.18	14.18	-0.154	0.881	0.03
Stage 4P	40.66	11.79	36.18	07.06	-1.05	0.317	-0.43
P	16.83	14.55	19.27	12.75	0.355	0.730	0.17
N2	16.90	12.14	20.16	15.58	0.521	0.614	0.22

The results for this sample on four scores of the DIT-2 showed there was no statistically significant difference between pre-test (N = 12) Stage 2/3 (M = 37.66, SD = 12.14), Stage 4P (M = 40.66, SD = 11.79), P score (M = 16.83, SD = 14.55), N2 (M = 16.90, SD = 12.14) scores and post-test (N = 11) Stage 2/3 (M = 38.18, SD = 14.18), $p = .881$, Stage 4P (M = 36.18, SD = 7.06), $p = .317$, P score (M = 19.27, SD = 12.75), $p = .730$, and N2 (M = 20.16, SD = 15.58), $p = .614$ scores. Hedge's g effect size value for Stage 2/3 score ($g = 0.03$) and P score ($g = 0.17$) suggested low practical significance. Hedge's g effect size value for Stage 4P ($g = -0.43$) and N2 score ($g = 0.22$) reported small practical significance.

5.1.2 DIT-2 Norms

The Centre for the Study of Ethical Development (CSED) has generated normative information for DIT-2 schema scores including N2 score, Post-conventional schema score, Personal Interest schema score, Maintaining Norms schema score, and Type indicator norms from the DIT-2 database maintained by the CSED between 2005 and 2009. The normative data represented diversity in age and level of education; however, the lowest educational level included was year 10 to 12. To gather normative information for the year 7 to year 8 education levels in this study, it was necessary to refer to earlier work conducted by Bebeau, Maeda, and Tichy-Reese (2003) who generated norms for DIT-2 schema scores from 176 DIT-2 datasets scored by the CSED between 1998 and 2003 (as cited in Thoma et al., 2011). These datasets comprised an analysis of 10,870 participants and represented diversity in age, education levels and geographical location within America. Means and standard deviations were reported for moral schema scores by level of education. The norms reported for the year 7-9 levels of education (equivalent to 12-year-old to 14-year-old age group) are displayed in Table 5.3.

Table 5.3

DIT-2 Normative Data for Year 7 – 9 Education Levels (Bebeau & Thoma, 2003, p. 35)

Stage 2/3		Stage 4		P score		N score	
Mean	SD	Mean	SD	Mean	SD	Mean	SD
35.21	14.41	41.69	11.01	15.78	13.05	12.84	12.17

DIT-2 norms established by CSED and displayed in Table 5.3, are comparable to mean scores for Stage 2/3, Stage 4P, P scores and N2 scores of the sample in this current study.

5.1.3 Individual Case Results

Individual participant pre-test – post-test stage 2/3, stage 4, P score, and N2 scores are displayed in Table 5.4.

Table 5.4

Comparison of Pre-Test – Post-Test DIT-2 Scores for Individuals

Code	Stage 2/3		Stage 4		P score		N2	
	a	b	a	b	a	b	a	b
S001	44	48	18	22	22	28	21.70	21.88
S002	46	22	46	44	0	30	9.95	40.02
S003	40	44	50	38	6	12	3.34	16.78

S004	28	56	22	38	50	2	27.70	47.43
S005	56	40	40	40	4	14	6.66	15.53
S006	50	46	42	32	2	22	3.72	18.55
S007	22	50	56	42	22	2	21.82	-6.12
S008	26	26	46	36	24	38	23.44	36.99
S009	38	8	38	44	22	40	18.33	45.52
S010	52	36	40	26	4	16	8.19	18.22
S011	22	-	56	-	16	-	19.94	-
S012	28	44	34	36	24	24	18.33	11.71

Note a = pre-test. b = post-test. S011 absent post-test.

Table 5.4 shows that of the sample who participated in both administrations of the DIT-2 (N = 11), 37% of participants had decreased Stage 2/3 scores, 37% had increased Stage 4 scores, 73% had increased P scores, and 82% had increased N2 scores.

5.1.4 Moral Schema Scores

The results below identify patterns in the three moral schema scores (Stage 2/3, Stage 4P, and P scores) for the combined sample according to the demographic variables of gender and age. Stage 2/3, Stage 4P, and P scores reflect the proportion of items selected that represent considerations from each of the

Personal Interest, Maintaining Norms, and Post-conventional schemas as described in Table 5.1.

Moral Schema Scores by Gender

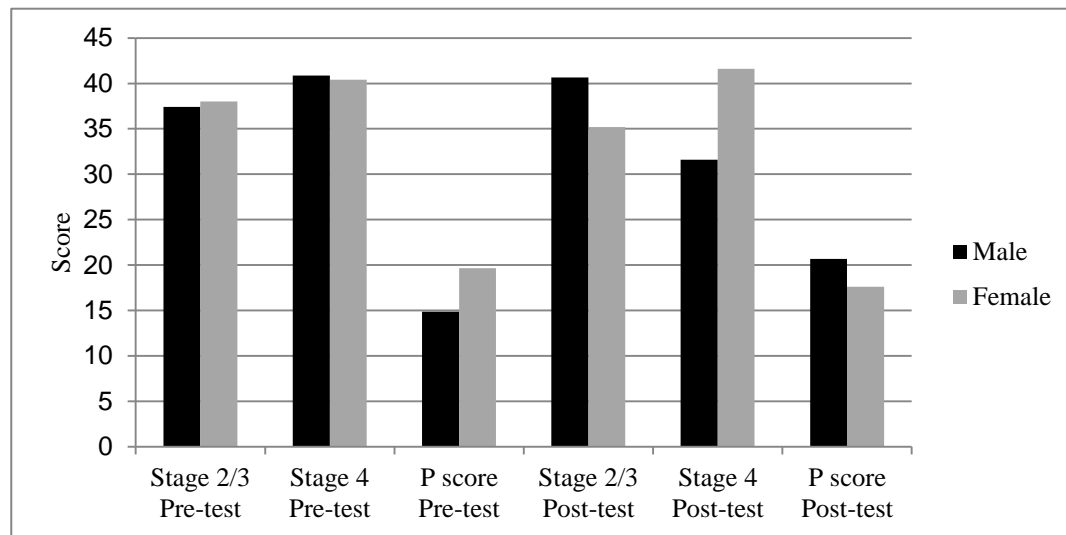


Figure 5.1. Comparison of pre-test – post-test moral schema scores for males and females.

Figure 5.1 showed that pre-test results indicated no significant difference between male ($n = 7$) scores for Stage 2/3 ($M = 37.40$, $SD = 12.09$), Stage 4 ($M = 40.85$, $SD = 12.32$), and P score ($M = 14.85$, $SD = 10.82$), and female ($n = 5$) scores for Stage 2/3 ($M = 38.00$, $SD = 13.63$), Stage 4 ($M = 40.40$, $SD = 12.44$), and P score ($M = 19.66$, $SD = 19.76$), $p > .001$. Post-test results showed no significant difference between male ($n = 6$) scores for Stage 2/3 ($M = 40.66$, $SD = 8.26$), Stage 4 ($M = 31.60$, $SD = 6.37$), and P score ($M = 20.66$, $SD = 9.40$), and female ($n = 5$) Stage 2/3 ($M = 35.20$, $SD = 19.92$), Stage 4 ($M = 41.60$, $SD = 2.60$), and P score ($M = 17.60$, $SD = 16.99$), $p > .001$. A notable difference between pre-

test and post-test results was the increase in male ($n = 6$) pre-test P scores ($M = 14.85$, $SD = 10.82$) and post-test P scores ($M = 20.66$, $SD = 9.40$), $p < .001$.

Hedge's g ($g = 0.52$).

Moral Schema Scores by Age Group

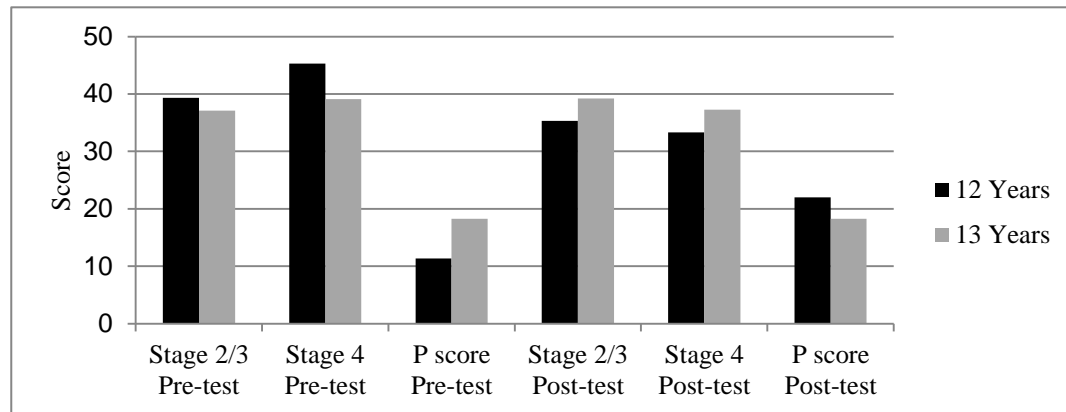


Figure 5.2. Comparison of pre-test – post-test moral schema scores for 12- and 13-year-olds.

Figure 5.2 showed that pre-test results indicated no significant difference between 12-year-old ($n = 3$) scores for Stage 2/3 ($M = 39.33$, $SD = 13.01$), Stage 4 ($M = 45.33$, $SD = 5.00$), and P score ($M = 11.33$, $SD = 11.01$), and 13-year-old ($n = 9$) scores for Stage 2/3 ($M = 37.11$, $SD = 12.61$), Stage 4 ($M = 39.11$, $SD = 13.19$), and P score ($M = 18.66$, $SD = 15.68$), $p > .001$. Post-test results showed no significant difference between 12-year-old ($n = 3$) scores for Stage 2/3 ($M = 35.33$, $SD = 9.01$), Stage 4 ($M = 33.33$, $SD = 6.40$), and P score ($M = 22.00$, $SD = 14.00$), and 13-year-old ($n = 9$) Stage 2/3 ($M = 39.25$, $SD = 16.10$), Stage 4 ($M = 37.25$, $SD = 7.40$), and P score ($M = 18.25$, $SD = 13.11$), $p > .001$. A notable difference

between pre-test and post-test results was the increase between 12-year-old ($n = 3$) pre-test P scores ($M = 11.33$, $SD = 11.01$) and post-test P scores ($M = 22.00$, $SD = 14.00$), $p < .001$.

4.1.7 Primary Moral Schema Types

Based on the moral schema scores, participants are attributed a primary moral schema type according to the following categories:

Type 1: predominant in personal interests

Type 2: predominant in personal interests, transitioning to maintaining norms

Type 3: predominant in maintaining norms, transitioning from personal interests

Type 4: predominant in maintaining norms

Type 5: predominant in maintaining norms, transitioning to post-conventional

Type 6: predominant in post-conventional, transitioning from maintaining norms

Type 7: predominant in post-conventional

The following Figures, 5.3 and 5.4, show the primary moral schema type of participants by gender and age.

Primary Moral Schema Type by Gender

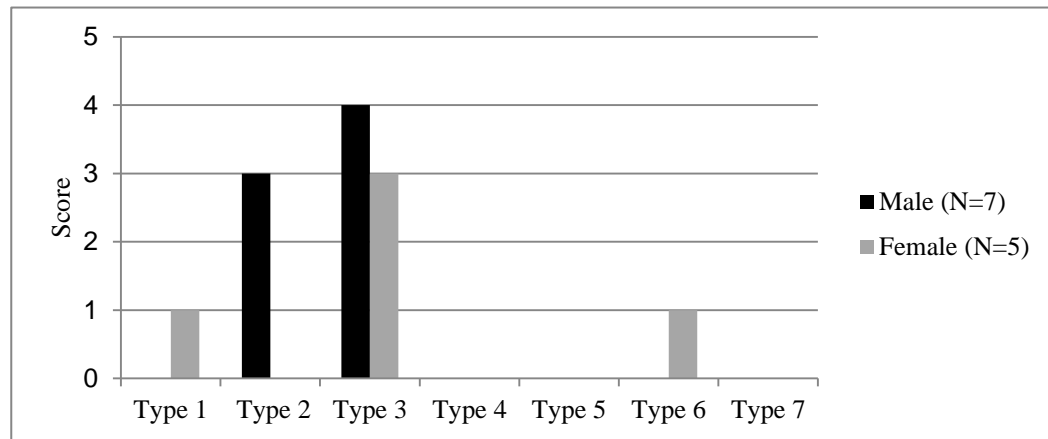


Figure 5.3. Pre-test primary schema type scores for males and females.

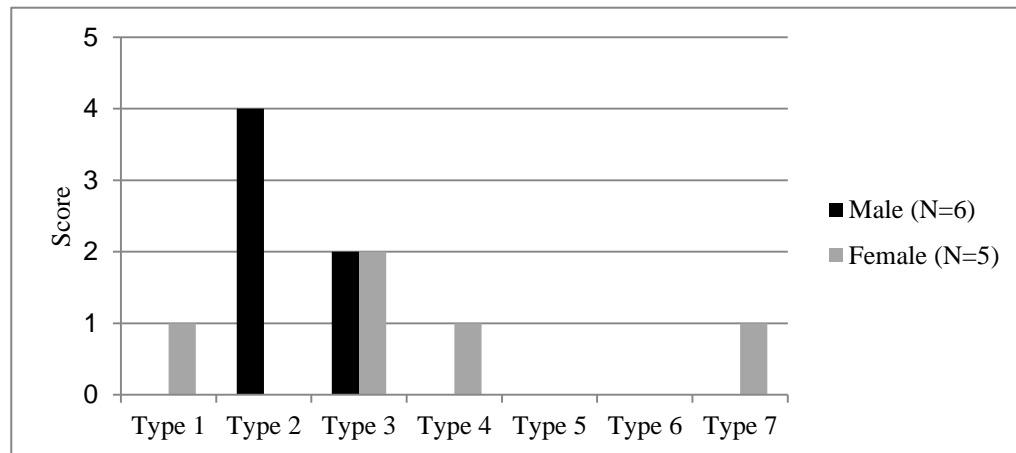


Figure 5.4. Post-test primary schema type scores for males and females.

Figure 5.3 and Figure 5.4 showed that in pre-test and post-test administrations of the DIT-2, male participants were categorised as Type 2 (predominant in personal interests, transitioning to maintaining norms) or Type 3 (predominant in maintaining norms, transitioning from personal interests). Female

participants in pre-test administration were categorised as Type 1 (predominant in personal interests), Type 3 (predominant in maintaining norms, transitioning from personal interests, and Type 6 (predominant in post-conventional, transitioning from maintaining norms). In post-test administration female participants were categorised as Type 1 (predominant in personal interests), Type 3 (predominant in maintaining norms, transitioning from personal interests), Type 4 (predominant in maintaining norms), and Type 7 (predominant in post-conventional).

Primary Moral Schema Type by Age Group

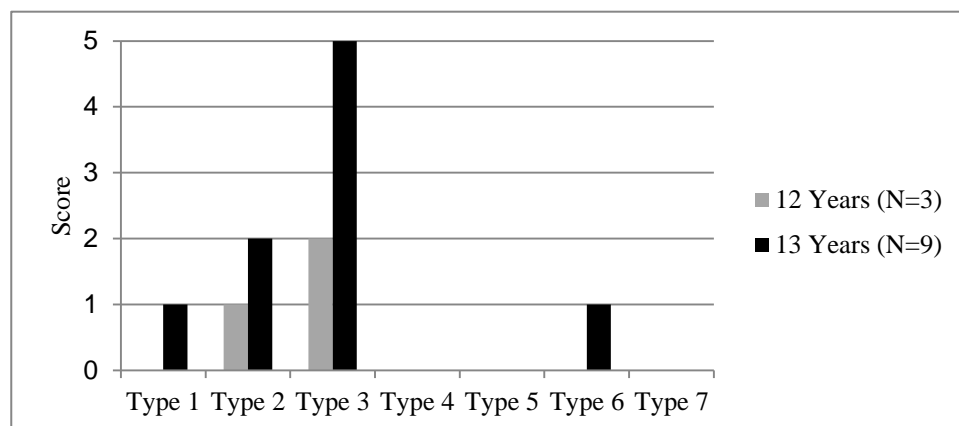


Figure 5.5. Pre-test primary schema type scores for 12- and 13-year-olds.

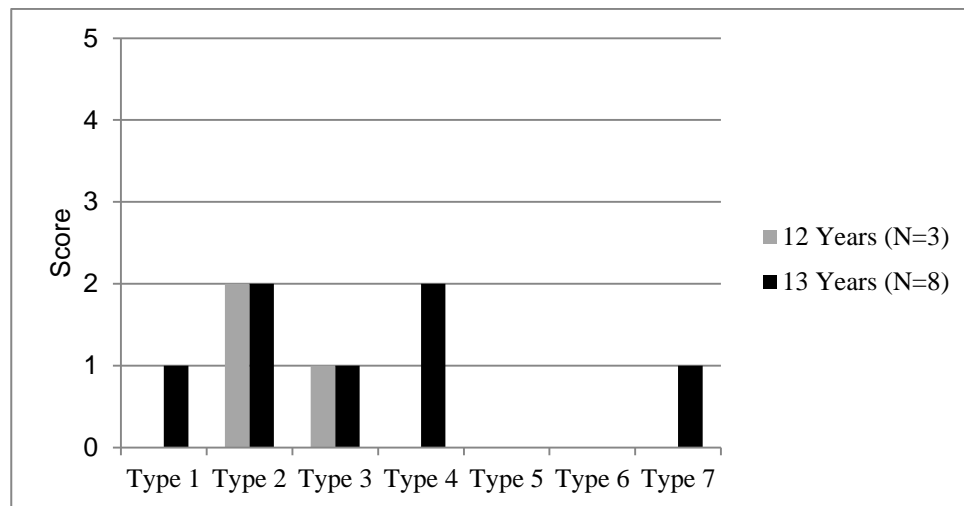


Figure 5.6. Post-test primary schema type for 12- and 13-year-olds.

Figure 5.5 and Figure 5.6 showed that in both pre-test and post-test administrations of the DIT-2, 12-year-old participants ($n = 3$) were categorised as Type 2 (predominant in personal interests, transitioning to maintaining norms) or Type 3 (predominant in maintaining norms, transitioning from personal interests). Figure 5.5 shows that 13-year-old participants ($n = 9$) in pre-test administration were categorised as Type 1 (predominant in personal interests), Type 2 (predominant in personal interests, transitioning to maintaining norms), Type 3 (predominant in maintaining norms, transitioning from personal interests, or Type 6 (predominant in post-conventional, transitioning from maintaining norms); whereas, Figure 5.6 shows that in post-test administration 13-year-old participants ($n = 8$) were categorised as Type 1 (predominant in personal interests), Type 2 (predominant in personal interests, transitioning to maintaining norms),

Type 3 (predominant in maintaining norms, transitioning from personal interests), Type 4 (predominant in maintaining norms), and Type 7 (predominant in post-conventional).

5.1.10 N2 and U Scores

The following results identify patterns in the N2 scores and U scores for the combined sample according to the demographic variables of gender and age. N2 score reflects the degree to which post-conventional items are prioritised over the personal interest items. U Score reflects the degree of match between the items prioritised and the moral decision. The following Figures, 5.7 and 5.8, show the N2 and U Scores of participants by gender and age.

N2 and U Scores by Gender

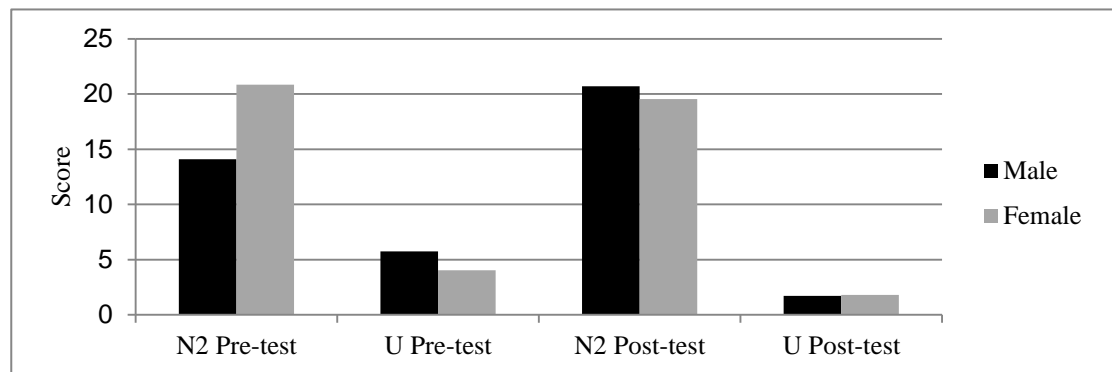


Figure 5.7. Comparison of pre-test – post-test N2 and U scores for males and females.

Figure 5.7 showed that pre-test results indicated no significant difference between male ($n = 7$) N2 ($M = 14.09$, $SD = 8.71$) and U ($M = 5.72$, $SD = 5.31$)

scores, and female ($n = 5$) N2 ($M = 20.8$, $SD = 16.07$) and U ($M = 4.04$, $SD = 5.43$), $p > .001$, scores. Post-test results showed no significant difference between male ($n = 7$) N2 ($M = 20.16$, $SD = 15.58$) and U ($M = 1.7$, $SD = 4.01$) scores, and female ($n = 5$) N2 ($M = 19.54$, $SD = 22.63$) and U ($M = 1.08$, $SD = 5.4$), $p > .001$, scores. The results showed no significant difference between female ($n = 5$) N2 ($M = 20.8$, $SD = 16.07$) and U ($M = 4.04$, $SD = 5.43$) pre-test scores and post-test ($n = 5$) N2 ($M = 19.54$, $SD = 22.63$) and U ($M = 1.08$, $SD = 5.4$), $p > .001$, scores. There was a notable difference in male ($n = 7$) N2 ($M = 14.09$, $SD = 8.71$) and U ($M = 5.72$, $SD = 5.31$) pre-test scores and post-test ($n = 7$) N2 ($M = 20.16$, $SD = 15.58$) and U ($M = 1.7$, $SD = 4.01$), $p > .001$, scores.

N2 and U Scores by Age Group

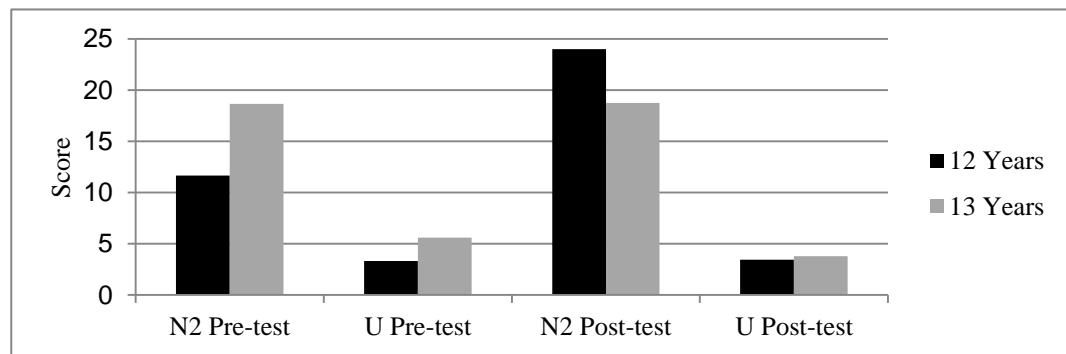


Figure 5.8. Comparison of pre-test – post-test N2 and U scores for 12- and 13-year-olds.

Figure 5.8 showed that pre-test results indicated no significant difference between 12-year-old ($n = 3$) N2 ($M = 11.65$, $SD = 10.48$) and U ($M = 3.32$, $SD = 5.70$) scores, and 13-year-old ($n = 3$) N2 ($M = 18.65$, $SD = 12.70$) and U ($M =$

5.59, $SD = 5.21$), $p > .001$, scores. Post-test results showed no significant difference between 12-year-old ($n = 3$) N2 ($M = 23.99$, $SD = 11.27$) and U ($M = 3.45$, $SD = 5.66$) scores, and 13-year-old ($n = 5$) N2 ($M = 18.73$, $SD = 17.37$) and U ($M = 3.80$, $SD = 5.12$), $p > .001$, scores. There was a notable increase in 12-year-old ($n = 3$) N2 scores between pre-test ($M = 11.65$, $SD = 10.48$) and post-test ($M = 23.99$, $SD = 11.27$), $p < .001$, although it should be noted that the 12-year-old group comprised 2 males and 1 female and that ..

An additional measure of the DIT-2 is the ‘undecided’ variable, which is an index of the decisiveness with which an individual selects action choices on the DIT-2. For each of the five stories on the DIT-2 the participant was provided with a ‘can’t decide’ option; the number of times that the participant selects this option is scored 0-5. The ‘undecided’ index is based on the view that indecision is in part a result of the ease or difficulty with which participants process moral information (Thoma et al., 2011). In this sample, undecided scores were low at pre-test ($M = 2.18$, $SD = 1.08$) and post-test ($M = 1.66$, $SD = 1.06$) administrations.

5.2 Ethical Sensitivity

The GEM-PR is a 23-item parent-report measure (see Appendix G) of children’s empathy, which in addition to providing an overall empathy score, measures total scores for two empathy subscales: a cognitive empathy component and an affective empathy component. The GEM-PR is a modified version of the Bryant Index of Empathy for Children and Adolescents (Bryant, 1982).

Modifications include the rewording of all items on the self-report Bryant Index of Empathy to make it suitable for a parent-report format and the change to a nine-point Likert scale ranging from strongly disagree (-4) to strongly agree (4). Total scores on the GEM-PR showed adequate convergent validity ($r = .412, p < .01$) with scores on the Bryant Index of Empathy, which has been widely used and shows adequate construct validity as a measure of empathy (Bryant, 1982; Lovett & Sheffield, 2007). In a study on the psychometric properties of the GEM-PR by Dadds et al. (2008), a factor analysis indicated that the instrument has two non-random dimensions, an affective factor and a cognitive factor, that are uncorrelated ($r = .068$) and have acceptable reliability for both the affective factor (.83) and the cognitive factor (.62). The scores for the measure range between -92 and 92. The measure includes two subscale empathy scores with the scores ranging between -28 and 28 for cognitive empathy, and between -64 and 64 for affective empathy.

5.2.1 GEM-PR Mean Scores

The results compare pre-test and post-test mean scores of cognitive, affective, and overall empathy for the whole sample as shown in Table 5.5.

Table 5.5

Comparison of Pre-Test – Post-Test GEM-PR Mean Scores

Empathy	Pre-test		Post-test		t	Sig.	g
	Mean	SD	Mean	SD			
Cognitive	10.50	6.05	17.33	5.85	5.18	.0003	1.10
Affective	19.41	12.68	24.66	10.45	2.12	.057	.40
Overall	29.91	15.78	42.00	15.45	4.26	.001	.74

Table 5.5 showed that the results for the GEM-PR indicated that there was a statistically significant difference between pre-test ($N = 12$) overall empathy ($M = 29.91$, $SD = 15.78$) and cognitive empathy ($M = 10.50$, $SD = 6.05$) scores and post-test overall empathy ($M = 42.00$, $SD = 15.45$), $p = .001$) and cognitive empathy ($M = 17.33$, $SD = 5.85$), $p = .0003$) scores. There was no statistically significant difference between pre-test ($M = 19.41$, $SD = 12.68$) and post-test ($M = 24.66$, $SD = 10.45$), $p > .001$, affective empathy scores. Hedge's g effect size value for overall empathy ($g = 0.74$) and affective empathy ($g = 0.40$) indicated small practical significance. Hedge's g effect size value for cognitive empathy ($g = 1.10$) suggested large practical significance.

The following Figures, 5.9 and 5.10, show the GEM-PR mean scores of participants by gender and age.

GEM-PR Mean Scores by Gender

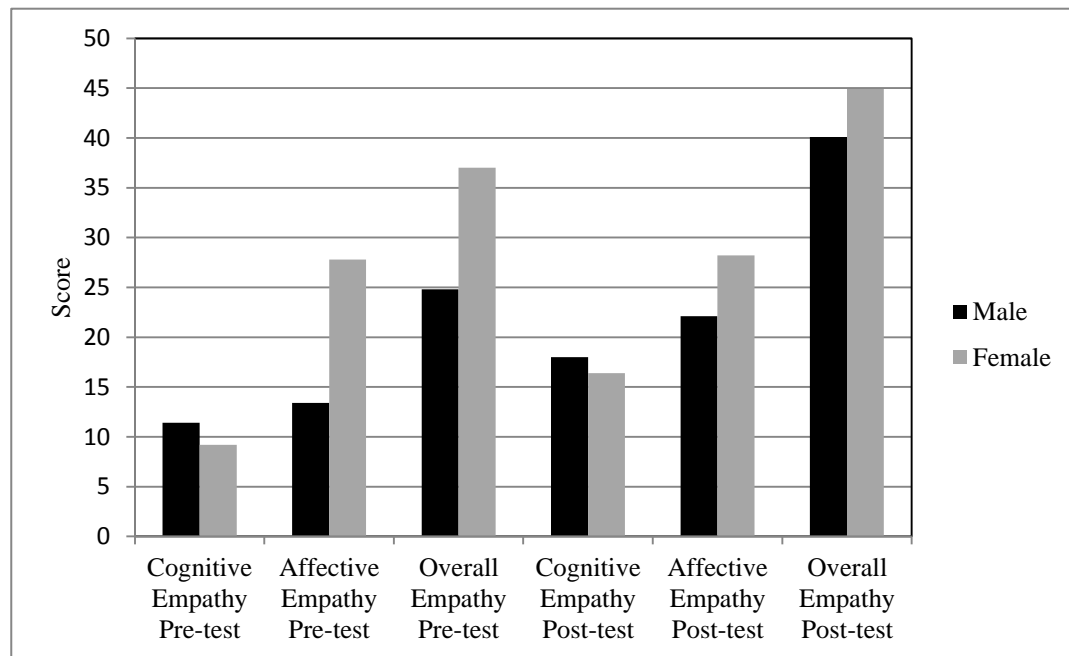


Figure 5.9. Comparison of pre-test – post-test GEM-PR scores for males and females.

Figure 5.9 showed that pre-test results indicated no statistically significant difference between male ($n = 7$) scores for cognitive ($M = 11.40$, $SD = 5.01$), affective ($M = 13.40$, $SD = 11.71$), or overall ($M = 24.85$, $SD = 13.47$) empathy, and female ($n = 5$) scores for cognitive ($M = 9.20$, $SD = 7.89$), affective ($M = 27.80$, $SD = 14.47$), or overall ($M = 37.00$, $SD = 21.87$), $p > .001$, empathy. Post-test results showed no statistically significant difference between male ($n = 7$) scores for cognitive ($M = 18.00$, $SD = 5.85$), affective ($M = 22.10$, $SD = 10.51$), or

overall ($M = 40.10$, $SD = 13.47$) empathy, and female ($n = 5$) scores for cognitive ($M = 16.40$, $SD = 6.38$), affective ($M = 28.20$, $SD = 11.49$), or overall ($M = 44.90$, $SD = 16.04$), $p > .001$, empathy. Male scores for cognitive empathy were higher than female score in pre-test and post-test administrations. Female scores for affective and overall empathy were higher than male scores on pre-test and post-test administrations. Hedge's g effect size values for male cognitive ($g = 0.82$), affective ($g = 0.90$) and overall ($g = 0.96$) empathy suggested large practical significance. Hedge's g effect size values for female cognitive ($g = 0.7$) and affective ($g = 0.57$) empathy suggested medium practical significance, and for overall empathy ($g = 0.24$) suggested small practical significance.

GEM-PR Mean Scores by Age Group

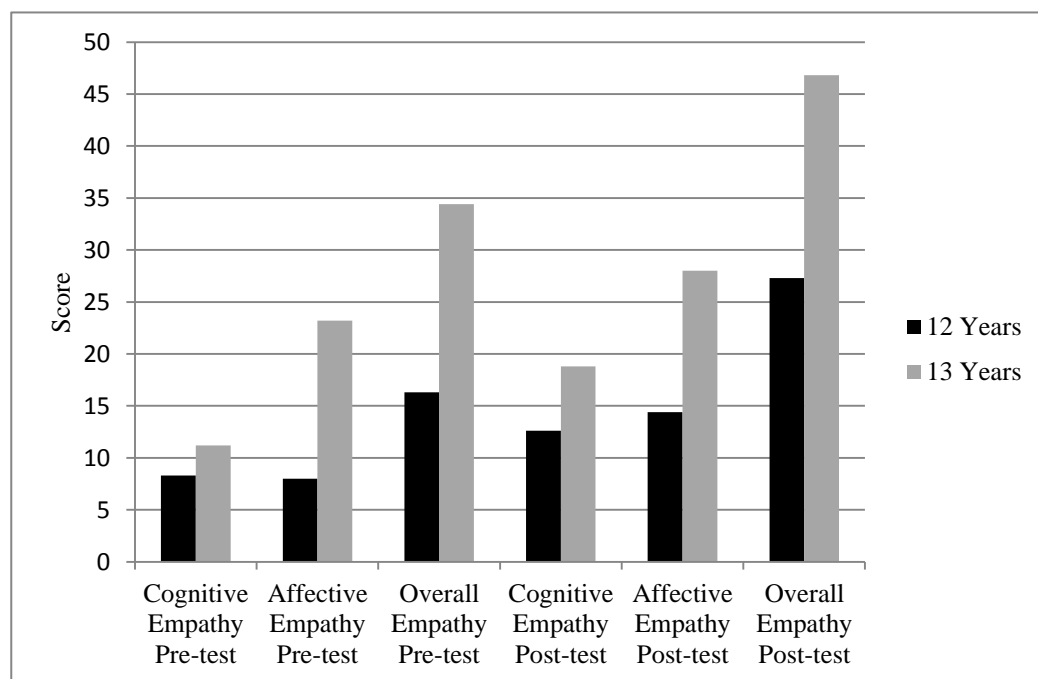


Figure 5.10. Comparison of pre-test – post-test GEM-PR mean scores for 12- and 13-year-olds.

Figure 5.10 showed that pre-test results indicated no statistically significant difference between 12-year-old ($n = 3$) scores for cognitive ($M = 8.33$, $SD = 3.05$), affective ($M = 8.00$, $SD = 9.00$), or overall ($M = 16.33$, $SD = 8.50$) empathy, and 13-year-old ($n = 9$) scores for cognitive ($M = 13.22$, $SD = 6.68$), affective ($M = 22.55$, $SD = 14.72$), or overall ($M = 35.77$, $SD = 18.10$), $p > .001$, empathy. Post-test results showed no statistically significant difference between 12-year-old ($n = 3$) scores for cognitive ($M = 12.66$, $SD = 3.05$), affective ($M = 14.66$, $SD = 6.65$), or overall ($M = 27.33$, $SD = 9.29$) empathy, and 13-year-old ($n = 9$) scores for cognitive ($M = 18.88$, $SD = 5.81$), affective ($M = 28.00$, $SD = 9.44$), or overall ($M = 46.88$, $SD = 14.11$), $p > .001$, empathy. 13-year-old scores for cognitive, affective and overall empathy were higher than 12-year-old scores on pre-test and post-test administrations. Hedge's g effect size values for 12-year-old cognitive ($g = 1.13$) and overall ($g = 0.98$) empathy suggested large practical significance, and for affective empathy ($g = 0.60$) suggested medium practical significance. Hedge's g effect size values for 13-year-old scores suggested large practical significance for cognitive ($g = 0.86$), small practical significance for affective ($g = 0.41$) and medium practical significance for overall ($g = 0.65$) empathy.

Individual Participant Results

The final GEM-PR results reported are the findings of the analysis of individual participant scores. Individual scores are presented in Table 5.6 below. In order to gather a deeper understanding of each student's empathy development, raw data were used to identify individual variances, changes and patterns. To facilitate the comparison of participant results on each dimension of ethical understanding, pre-test and post-test overall empathy values were categorised into low (< -31), medium ($-31 - 30$), and high (> 30) scores.

Table 5.6

Comparison of Pre-Test – Post-Test GEM-PR Scores for Individuals

	Pre-test			Post-test		
	Cog	Aff	Overall	Cog	Aff	Overall
S001 ¹	16	8	24	25	36	61
S002	2	18	20	12	16	28
S003 ¹	11	-1	10	10	7	17
S004	6	15	21	11	18	29
S005	11	25	36	15	32	47
S006 ¹	14	2	16	18	20	38
S007	23	50	73	27	38	65
S008 ¹	5	8	13	12	18	30
S009	10	37	47	17	37	54
S010 ¹	9	17	26	16	19	35
S011 ¹	20	19	39	20	19	39
S012 ¹	17	29	46	25	36	61

Note. ¹ = Male

Table 5.6 showed that a comparison of pre-test and post-test scores indicated that the majority of students had increased scores for cognitive (93%), affective (70%), and overall (85%) empathy scores.

5.3 Ethical Character

The ethical character dimension of ethical understanding focusses on the development of the processes and skills necessary for effective moral action. Rest and Narvaez (1994) defined this dimension as relating to the character elements of “ego strength, perseverance, backbone, toughness, strength of conviction, and courage” (p. 24). Ethical character involves the capability to construct and implement actions to achieve the moral outcome, and emphasises the processes by which an individual undertakes an appropriate course of action, avoids distractions and maintains the courage to continue. The Australian Curriculum general capability, Ethical Understanding includes a learning continuum across all year levels that outlines the expected level of student achievement of the recognised elements of ethical understanding including: Understanding ethical concepts and issues; Reflecting on personal ethics in experiences and decision making; and Exploring values, rights and ethical principles (ACARA, 2013). Among the recognised elements are indicators of behavioural traits that contribute to the assessment of ethical character. As the assessment of ethical understanding has not been widely studied, no quantitative measure was available. The EUCQ was developed by the researcher as a 16-item Likert format teacher-report

questionnaire using the Ethical Understanding Learning Continuum Level Four, which is the level of achievement typically reached by the end of year 6 (ACARA, 2013). The scoring of the EUCQ was based on the A – E Achievement Standards utilised in reporting for the Australian Curriculum as follows:

A indicates that a student is performing well above the standard expected;

B indicates that a student is performing above the standard expected;

C indicates that a student is performing at the standard expected;

D indicates that a student is approaching the standard expected; and

E indicates that a student is performing below the standard expected.

(ACARA, 2015a, p. 3).

For the purpose of data analysis the A – E format was translated into numerical equivalents of 5 - 1. Each of the participating teachers completed the EUCQ individually by assigning each student a score ranging from 5 - 1 for each indicator based on their observations of the student's level of achievement according to the continuum of learning. Score averages were calculated and used to create the following equivalent score bands:

A = 80 (maximum possible score)

B = 64 to 79

C = 48 to 63

D = 32 to 47

E = 16 to 31

5.3.1 EUCQ Mean Scores

EUCQ mean scores are presented below in Table 5.7.

Table 5.7

Comparison of Pre-Test – Post-Test EUCQ Mean Scores

	Pre-test		Post-test		t	Sig. (2 tailed)	g
	Mean	SD	Mean	SD			
T1	51.25	5.37	53.91	12.36	-1.210	0.251	0.21
T2	62.66	5.63	61.83	5.73	0.989	0.344	-0.14

Table 5.7 showed that mean scores calculated from the assessments provided by T1 for the sample ($N = 12$) indicated no statistically significant difference between pre-test ($M = 51.25$, $SD = 5.37$) and post-test ($M = 53.91$, $SD = 12.36$), $p > .001$, scores. Further, Hedge's g effect size value ($g = 0.21$) reported a medium practical significance. Individual pre-test scores indicated that 17% of students were assessed as below the expected standard, 33% of students were assessed as approaching the expected standard, 17% at the expected standard, and 33% above the expected standard. Post-test scores indicated that 42% were approaching expected standard, 58% at expected standard.

Mean scores calculated from the assessments provided by T2 for the sample ($N = 12$) showed no statistically significant difference between pre-test ($M = 62.66$, $SD = 5.63$) and post-test ($M = 61.83$, $SD = 5.73$), $p > .001$, scores. Further, Hedge's g effect size value ($g = -0.14$) reported low practical significance. Individual pre-test and post-test scores indicated that 58% of students were assessed at the expected standard, and 42% above the expected standard.

The following Figures, 5.11 and 5.12, show the EUCQ mean scores of participants by gender and age.

5.3.2 EUCQ Mean Scores by Gender

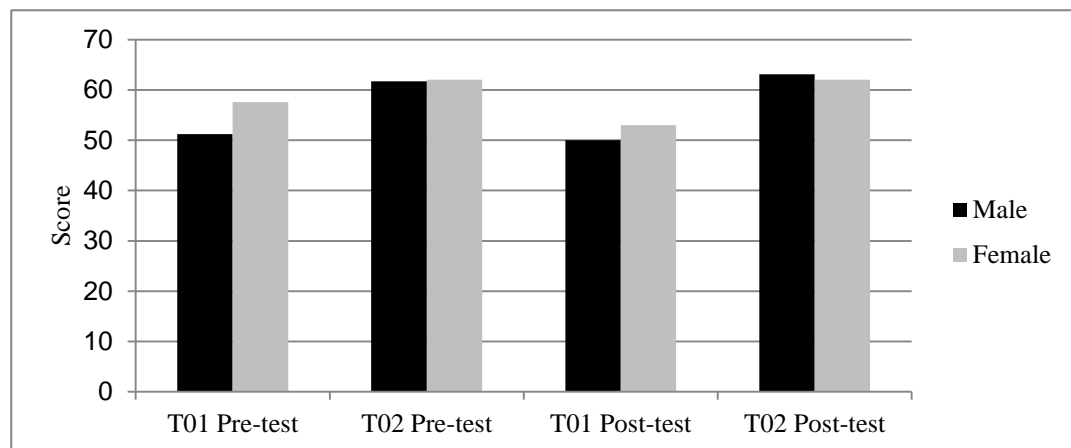


Figure 5.11. *Comparison of pre-test – post-test EUCQ scores for males and females.*

Figure 5.11 showed that pre-test results reported for T1 indicated no significant difference between male ($n = 7$) scores ($M = 51.28$, $SD = 12.73$) and female ($n = 5$) scores ($M = 58.80$, $SD = 12.75$), $p > .001$. Post-test results showed no significant difference from pre-test scores for males ($M = 50.00$, $SD = 5.35$) or

females ($n = 5$) ($M = 53.00$, $SD = 5.47$), $p > .001$. Hedge's g effect size value for males ($g = -0.10$) and females ($g = -0.19$) suggested low practical significance.

Pre-test results reported for T2 showed no significant difference between male ($n = 7$) scores ($M = 61.71$, $SD = 5.93$) and female ($n = 5$) scores ($M = 62.00$, $SD = 6.12$), $p > .001$. Post-test results showed no significant difference from pre-test scores for males ($M = 63.14$, $SD = 6.03$) or females ($n = 5$) ($M = 62.00$, $SD = 5.61$), $p > .001$. Hedge's g effect size value for males ($g = 0.20$) suggested small practical significance, and for females ($g = 0.00$) suggested no practical significance.

5.3.3 EUCQ Mean Scores by Age Group

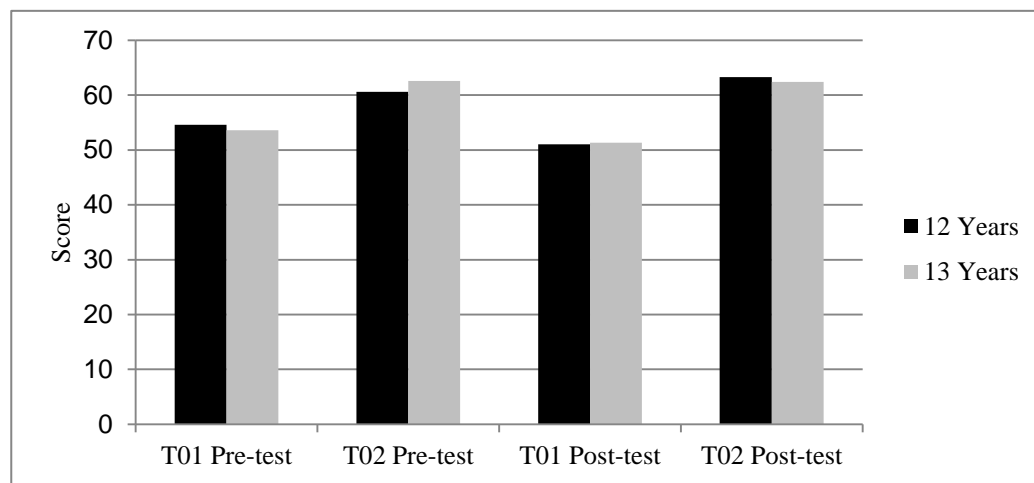


Figure 5.12. Comparison of pre-test – post-test EUCQ scores for 12- and 13-year-olds.

Figure 5.12 showed that pre-test results reported for T1 indicated no significant difference between 12-year-old ($n = 3$) scores ($M = 54.66$, $SD = 17.78$)

and 13-year-old ($n = 9$) scores ($M = 54.33$, $SD = 12.02$), $p > .001$. Post-test results showed no significant difference from pre-test scores for 12-year-old ($M = 51.00$, $SD = 5.29$) or 13-year-old ($M = 51.33$, $SD = 5.72$), $p > .001$ scores. Hedge's g effect size value for 12-year-olds ($g = -0.22$) and 13-year-olds ($g = -0.30$) suggested medium practical significance.

Pre-test results reported for T2 showed no significant difference between 12-year-old ($n = 3$) scores ($M = 60.66$, $SD = 5.68$) and 13-year-old ($n = 9$) scores ($M = 62.22$, $SD = 6.03$), $p > .001$. Post-test results showed no significant difference between pre-test scores for 12-year-old ($M = 63.37$, $SD = 4.50$) and 13-year-old ($n = 9$) ($M = 62.44$, $SD = 6.18$), $p > .001$. Hedge's g effect size value for 12-year olds ($g = 0.42$) suggested small practical significance, and for 13-year-olds ($g = 0.00$) suggested no practical significance.

5.3.4 Assessment of the Indicators for Ethical Character

In addition to the analysis of data relating to the performance of the student sample, examination of the teachers' average scores for each criterion were analysed to provide information relating to the achievement of moral education aims. The results are presented in Table 5.8.

Table 5.8

Teacher Assessment of EUCQ Indicators

		Pre-test		Post-test	
Capability	Indicator of ethical understanding capability	T1	T2	T1	T2
Understanding ethical concepts and issues					
Recognise ethical concepts	1. Explains ethical concepts such as truth and justice that contribute to the achievement of a particular outcome.	39	41	40	43
	2. Understands the difference between an honest mistake and intentional deception.	48	52	48	50
Explore ethical concepts in context	3. Explains what constitutes an ethically better or worse outcome and how it might be accomplished.	41	42	37	44
	4. Understands the consequences for individuals of others' actions, in a range of scenarios.	52	52	48	49
Reasoning in decision-making and actions					
Reason and make ethical decisions	5. Explains the reasons behind there being a variety of ethical positions on a social issue.	35	41	37	42
	6. Recognises conflicting media reports about the same event.	33	49	30	50
Consider consequences	7. Explains the consequences of actions in familiar and hypothetical scenarios.	49	51	48	45

	8. Understands possible consequences of including or excluding a person or a group.	48	51	46	53
Reflect on ethical action	9. Articulates a range of ethical responses to situations in various social contexts.	21	41	37	47
	10. Able to weigh the relative merits of actions to prevent harm to animals.	60	52	48	54
Exploring values, rights and responsibilities					
Examine values	11. Identifies values accepted and enacted within various communities.	32	41	30	47
	12. Recognises instances where equality, fairness, dignity, and non-discrimination are required.	49	48	44	48
Explore rights and responsibilities	13. Demonstrates consistency between rights and responsibilities when interacting face-to-face or through social media.	36	45	36	44
	14. Understands the differences between freedom of speech and destructive criticism in debates or through social media.	36	50	24	42
Consider points of view	15. Explains a range of possible interpretations and points of view when thinking about ethical dilemmas.	40	40	30	49
	16. Identifies biased research findings.	29	40	36	42

Table 5.8 showed that pre-test scores provided by T1 indicated that 53% of the criteria were being achieved at the expected standard and 47% were not being

achieved at the expected standard. Post-test scores indicated that 72% of the criteria were being achieved at the expected standard. Pre-test scores provided by T2 indicated that 56% of the criteria were being achieved at the expected level and 44% were being achieved above the expected standard. Post-test scores provided by T2 indicated that 63% were being achieved at the expected standard and 37% were being achieved above the expected standard.

5.4 Ethical Identity

The ASLP was designed using award-winning author Jerry Spinelli's book titled *Wringer* (1997), in which an early adolescent boy struggles with the conflict of whether or not to take part in a tradition involving animal cruelty. Upon turning 10, boys in his town are expected to become "wringers," responsible for wringing the necks of wounded pigeons at the annual Pigeon Day shoot. The book and corresponding literacy activities students to examine ethical dilemmas, build compassion, and take an in-depth look at peer pressure and bullying. The questions required students to draw upon their own ethical understanding to reflect on the text and provide written answers. The responses of 11 participants were used in this analysis; the excluded participant had been absent from school for an extended period and had not completed the ASLP readings or written activities.

5.4.1 Animal Studies Literacy Program (ASLP)

The questions were constructed for two purposes, the first was to assess whether students comprehended the story to enable them to offer written

reflection; the second, which is presented here, was to offer insights into the four dimensions of ethical understanding: ethical judgement, ethical sensitivity, ethical character and ethical identity. Through the process of content analysis, responses to focus questions were coded and categorised according to themes related to ethical identity. The written responses were extensive and diverse. To illustrate the diversity of responses, a selection of students' written responses to individual ASLP questions are presented below. The questions with specific relevance to each dimension are discussed in the following chapter. A complete ASLP can be found in Appendix J.

Question 2. How are you feeling about reading the rest of the story?

This first question was posed to gauge students' interest in the story and to identify whether they recognise the ethical concepts introduced.

- *I am happy to be reading the rest of the story because it sounds interesting and is so far like no book I've read. (S001).*
- *I think this book will get really interesting, at the moment it's a bit boring but it might get interesting. (S009)*
- *I'm not sure yet the book is a little weird. (S007)*

The answers given to question 2 showed differing levels of interest in reading the book. No mention was made of any ethical concepts.

Question 6. How would you feel if you were in Palmer's shoes?

In this section of the book, Palmer has his ninth Birthday. Amongst the children of the town, there is a custom referred to as ‘The Treatment’. The custom involves an older boy named Farquar subjecting any boy who has their birthday to a punch in the arm for each year of age. Palmer is aware that it is considered an honour to endure the bruises of the treatment and that children who do so are treated with respect from their peers. Despite his fear of the pain, Palmer succumbs to peer-pressure and endures the treatment. Question 6 was posed to allow students to reveal their understanding of and empathy for another person.

- *I would try to avoid Farquar at all costs. (S001)*
- *I would feel like those boys don't really like me and that I would have a sore arm. (S002)*
- *Very hurt and sad. (S006)*
- *Scared, terrified. Guessing what's going to happen next. (S007)*
- *I would feel happy that it was my birthday but I wouldn't like to be punched nine times in the arm hard, I'd hit them back. (S010)*

Question 9. What do you hope will happen in the next section of the book?

Why?

By this stage in the story, an explanation of the events that will take place on Pigeon Shooting Day have been explained and the reader is aware that Palmer will have to choose whether to take part or not. Question 9 was included to offer

insights into whether the participants recognised the ethical implications and character of Palmer.

- *He rescues the birds. He feels sorry for them. (S001)*
- *I think that Palmer will try to stop the shooting of the pigeons. (S002)*
- *I hope that Palmer wrings a pigeon (S006)*
- *His friends might leave him because he doesn't want to become a wringer. (S008)*

Question 11. Have you ever been mean to someone when you felt uncomfortable? If so, why do you think you were?

In this section of the book, a pigeon begins to visit Palmer and although Palmer is interested in interacting with the bird he is afraid of encouraging the bird to stay around the town because it will be in danger with Pigeon Shooting Day approaching. He refers to the pigeon as the world's dumbest bird and is torn between wanting to be kind and wanting to scare it away. Question 11 encourages participants to identify how they feel about being mean.

- *I don't think I have because it would not be the right thing to do and it would make you feel more uncomfortable. (S003)*
- *No, because I try not to be mean to people even if they are mean to me. (S007)*
- *Because it may have been happening to me. (S010)*
- *Yes. Most likely because I was frustrated. (S011)*

Question 14. Have you ever kept a secret about something somebody has done that you knew was wrong? How did it make you feel?

Palmer reveals to his friend that he is keeping a pigeon, that he has named Nipper, as a pet. This question required students to identify and reflect upon an experience of ethical conflict.

- *I have and I felt guilt. (S001)*
- *I think I have. It made me feel like they trusted me. (S004)*
- *Yes. I felt like it was very bad to keep it. (S006)*
- *Yes, it made me feel uncomfortable around the people I trust because I needed to tell them but I couldn't. (S009)*

Question 17. How do you feel when other people get in trouble?

Palmer deliberately acts in an uncharacteristic manner that will cause him to be given detention after school. This question was included to gain insights into aspects of students' empathy levels.

- *Sometimes I feel like they deserve it. (S001)*
- *If it is someone I don't like it is funny but if it is my friend I feel annoyed. (S002)*
- *I feel like it was stupid to do it in the first place and they probably deserve the punishment. (S005)*

- *It depends on what they do, if it is something small and hardly get in trouble they should get a warning. But if people do it all the time they should get punished. (S007)*
- *If it's my friends then I feel sorry for them. If it's people I don't like then I don't care. (S008)*
- *I think it's funny sometimes and it depends what they did and that they are stupid. (S010)*

Question 24. A child at the end of the story says “Can I have one too Daddy?” asking to have a pet pigeon. What impact do you think Palmer’s actions had on the crowd?

Palmer is surprised that he is not ridiculed for saving the pigeon and that his act of kindness had a positive influence on the crowd. This question was designed to assess students’ comprehension of the story and opinions regarding the actions taken by the main character.

- *The crowd start to accept pigeons in their society. (S001)*
- *He showed them pigeons are kind animals and all the town were wrong about pigeons. (S004)*
- *I think that people may see killing pigeons differently and they may decide to have them as pets instead. (S005)*
- *It was touching and they didn't mind that he had a pet pigeon. (S008)*

- *Palmer's actions had a big impact on the crowd, especially on the kid. Most people think that he shouldn't have done this but he did it to save a life. (S009)*
- *They made the crowd feel that pigeons aren't so bad and they can be pets. (S011)*

Question 26. How can you help to create change by your example. Make a list of at least three things that you could do.

This question was included to illicit students' ideas relating to ethical action.

- *Talk more. More kind. More caring. (S003)*
- *Help out with charities. Raise awareness of causes. Organise fundraisers at the school. (S004)*
- *When around younger children we can act responsibly so they know what's wrong and what's right. (I can't think of 3). (S005)*
- *Do the right thing. Help others. Be kind to others. (S006)*
- *Encourage people to stop bullying. Donate to people in need. Give Put-ups not Put-downs. (S011)*

During the initial analysis of the written answers, it emerged that students' responses reflected three distinct levels of development with two intermediate levels positioned between levels one and three, and levels three and five. The levels were consistent with Kohlberg's pre-conventional, conventional, and post-conventional stages of moral development. Having identified these levels, a five-

point scale was devised, and further textual analysis was undertaken to identify and quantify the use of specific words or phrases that distinguish responses as being representative of either pre-conventional, conventional, or post-conventional level. Finally, each participant's response to individual questions was categorised into the corresponding level on the scale. The results revealed that participant responses for the total questions could be attributed a level, and each student was scored as having that level of ethical identity. These levels are described below and further summarized in Table 5.9.

Level 1 defines doing right as following the rules that have been distributed by authority figures. The reason for obeying these rules is often fear of punishment or an unquestioning regard for authority. Children at this stage also define the right as avoiding physical harm to objects or others. Responses at this level reflected a self-focused or pragmatic viewpoint. Participants at this level did not indicate a sense of self. Furthermore, these students did not refer to moral reasons or express personal meaning in their responses.

At level 3 the individual determines what is right exclusively in terms of his own, or another's individual interest. Fairness is an issue at this level, but is understood only in instrumental, concrete terms and is focused on serving the individual's needs, interests, and desires. At this stage, the individual is able to reflect on his own thoughts and feelings and is capable of understanding that other

people may have different thoughts and feelings but is not proficient at adopting another's perspective.

At level 5 the individual gains an awareness of the abstract thought processes of other persons. The ability to infer what others are thinking and feeling is employed when making moral decisions. The focus at this stage is to gain a sense of happiness or satisfaction, and moral decisions are framed in terms of upholding conventional human relationships. Responses at this level demonstrate significant evidence for ethical identity development. The distinguishing features of responses at this level are the references to self and intrinsic motivations. Level 5 responses also showed evidence of a broader appreciation of ethical value on a scale beyond concern for immediate relations. Students at this level of ethical identity development were able to express a personal relevance of ethical values and intrinsic motivation for upholding them.

Table 5.9

Thematic Categorisation of Levels of Ethical Identity

Level of ethical identity	Indicator	Example of response
Level 1	Decision-making based on following rules and respecting authority. Self-focused.	It was stupid to do it in the first place and they probably deserve the punishment (S005). Yes, because you get nervous and it just comes out. So that people won't stare at you. (S005).

Level 3	<p>Decision-making focused on self-interests.</p> <p>Influenced by external factors.</p>	<p>Because I don't like the situation. (S008)</p> <p>Yes, most likely because I was frustrated. (S011)</p> <p>Yes. It made me feel like I needed to keep that secret. (S005)</p>
Level 5	<p>Decision-making based on concerns other than self or personal relevance.</p> <p>Reference to self and intrinsic motivations.</p>	<p>No, because I try not to be mean to people even if they are mean to me. (S007)</p> <p>I don't think I have because it would not be the right thing to do and it would make you feel more uncomfortable. (S003)</p> <p>I have and I felt guilty. (S001)</p> <p>Yes, it made me feel uncomfortable around the people I trust because I needed to tell them but I couldn't. (S009)</p>

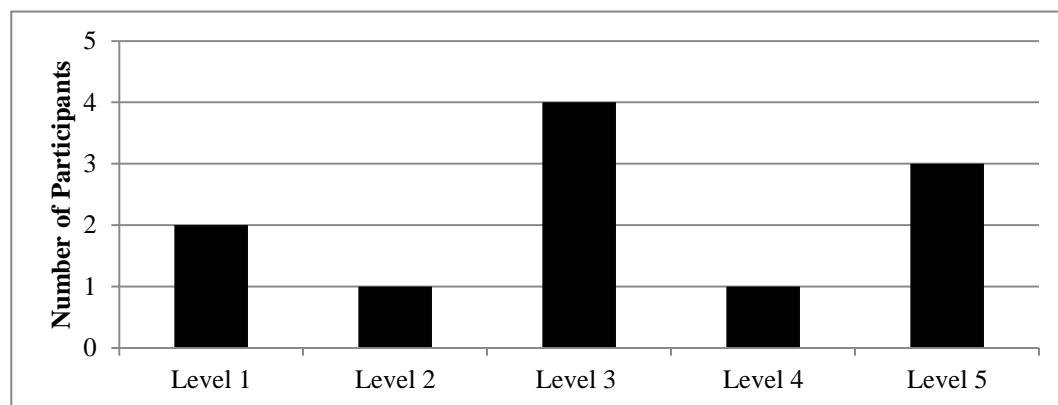


Figure 5.13. Qualitative analysis of students' written responses to ASLP questions.

Figure 5.13 shows the distribution of scores on the 5-point scale. The distribution had a slightly greater proportion of students with scores at the higher end (4- or 5-

points) as compared to the lower end (1- or 2-points). It can also be seen that the modal point was at level 3 ($M = 3.45$, $SD = 1.43$), and these mid-level scores were the most frequent. Investigations for differences between genders and ages showed no significance between scores for males ($M = 3.33$, $SD = 1.34$) and females ($M = 3.60$, $SD = 1.63$), $p > .001$, or between 12-year-olds ($M = 2.66$, $SD = 2.08$) and 13-year olds ($M = 3.75$, $SD = 1.16$), $p > .001$.

5.5 Attitudes Towards Animals

The PAS is an 18-item Likert format self-report instrument that assesses the extent of children's positive attitudes towards pets. Since the scale's development, subsequent research has extended construct validity, and the PAS is one of a limited number of published human-animal bond scales with reliability information (Cronbach alpha of .93, and two-week test-retest stability of .92 (Lago, Kafer, Delaney, & Conell, 1988). The PAS-M is a modified version of the PAS, which was worded in a manner that assumed pet ownership, for example; "house pets add happiness to my life". Modification of the PAS consisted of adding the qualifier; "or would if I had one" to provide greater relevance to participants who do not own a pet at the time they complete the questionnaire (see Appendix L for the PAS-M version used in this study). Scoring of the PAS-M results in the subject's Pet Attitude Score in a range between 18 and 126. The higher the Pet Attitude Score, the more positive the subject's feelings are towards

animals. The comparison of students' pre-test – post-test PAS-M mean scores are presented in table 5.10.

Table 5.10

Comparison of Pre-Test – Post-Test PAS-M Mean Scores

	Pre-test		Post-test		t	Sig. (2-tailed)	g
	Mean	SD	Mean	SD			
PAS-M	91.66	12.45	97.75	12.47	4.294	.001	0.43

Table 5.10 showed that results for the sample ($N = 12$) indicated a significant difference between pre-test ($M = 91.66$, $SD = 12.45$) and post-test ($M = 97.75$, $SD = 12.47$), $p = .001$) PAS-M scores. Further, Hedge's g effect size value ($g = 0.43$) reported a medium practical significance.

5.5.1 Individual Participant PAS-M Scores

Individual participant scores for pre-test and post-test administrations of the PAS-M are presented in Table 5.11 below.

Table 5.11

Comparison of Pre-Test – Post-Test Individual Scores

	Pre-test	Post-test
Code		
S001	109	113
S002	73	76
S003	94	96
S004	78	91
S005	98	113
S006	70	81
S007	103	111
S008	91	98
S009	106	112
S010	92	96
S011	90	90
S012	96	98

Table 5.11 showed that 11 participants (92%) had increased scores at post-test and one participant (8%) had an unchanged score.

5.5.2 PAS-M Scores by Gender

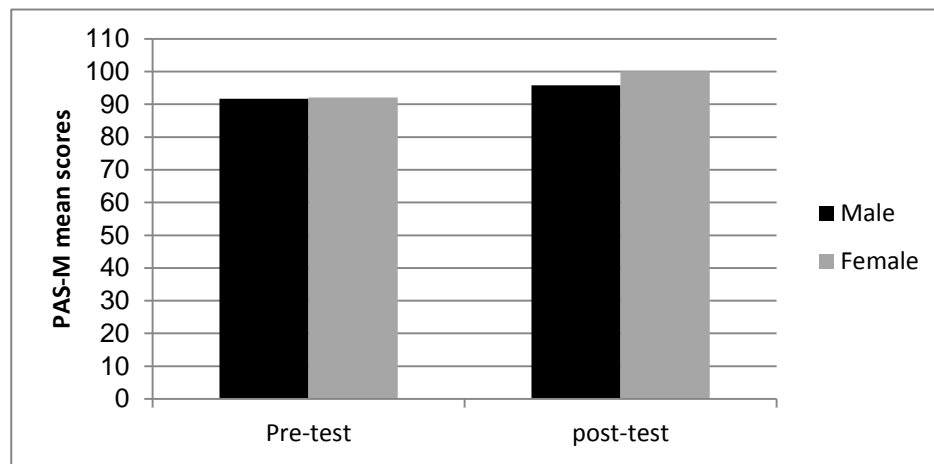


Figure 5.14. Comparison of pre-test – post-test PAS-M scores for males and females.

Figure 5.14 indicated similar pre-test results for male ($n = 7$) PAS-M scores ($M = 91.71$, $SD = 11.52$) and female ($n = 5$) PAS-M scores ($M = 92.11$, $SD = 15.07$), $p > .001$. Post-test results showed an increase in scores for each group but no significant difference between scores for males ($n = 6$) ($M = 95.71$, $SD = 9.60$) and females ($n = 5$) ($M = 100.12$, $SD = 16.50$), $p > .001$.

5.5.3 PAS-M Mean Scores by Age

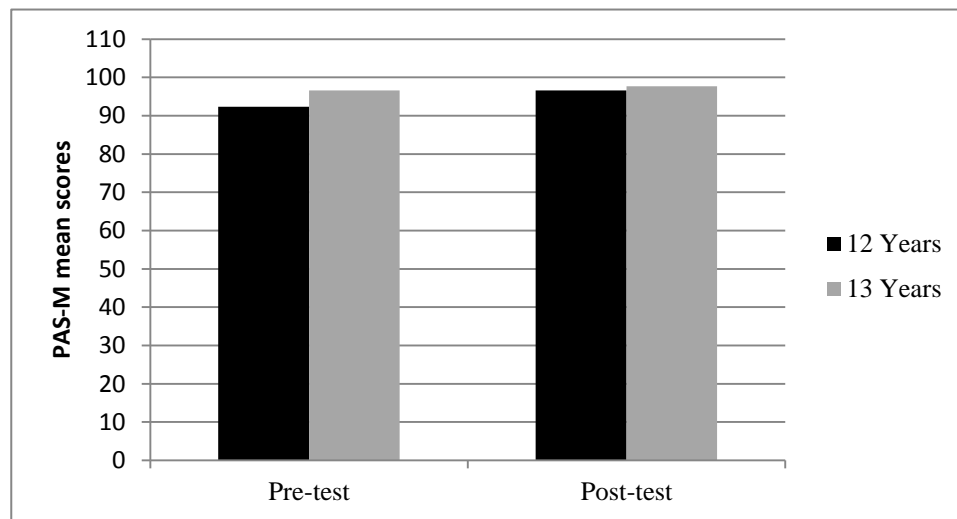


Figure 5.15. Comparison of pre-test – post-test PAS-M scores for 12- and 13-year-olds.

Figure 5.15 indicated similar pre-test results for 12-year-old ($n = 3$) PAS-M scores ($M = 92.33$, $SD = 1.52$) and 13-year-old ($n = 9$) PAS-M scores ($M = 91.44$, $SD = 14.57$), $p > .001$. Post-test results showed increased scores for each group but no significant difference between 12-year-olds ($M = 96.66$, $SD = 1.15$) and 13-year-olds ($M = 98.11$, $SD = 14.59$), $p > .001$.

5.6 Correlations

An objective of the study was to investigate the relationship between children's attitudes towards animals and the dimensions of ethical judgement, ethical sensitivity, and ethical character; for this purpose, a Pearson's coefficient was conducted to assess the correlations between the PAS-M, DIT-2 P scores, GEM-PR overall empathy, and EUCQ results. Table 5.12 presents the Pearson's

coefficient results indicating that no correlations between variables were identified.

Table 5.12

Correlations Between PAS-M, DIT-2, GEM-PR, and EUCQ Mean Scores

		Correlations			
		PAS-M	DIT-2	GEM-PR	EUCQ
PAS-M	Pearson Correlation	1	.165	.521	.170
	Sig. (2-tailed)		.609	.082	.598
	N	12	12	12	12
DIT-2	Pearson Correlation	.165	1	.189	.367
	Sig. (2-tailed)	.609		.555	.241
	N	12	12	12	12
GEM-PR	Pearson Correlation	.521	.189	1	.067
	Sig. (2-tailed)	.082	.555		.837
	N	12	12	12	12
EUCQ	Pearson Correlation	.170	.367	.067	1
	Sig. (2-tailed)	.598	.241	.837	
	N	12	12	12	12

5.7 Group Interviews

The interview schedule for the two 30 minute semi-structured group interviews included four questions designed to stimulate discussion surrounding students' understanding of the aims of moral education, the role that animals might play in their own development of ethical understanding, and their perceptions of educational experiences designed to assist in the realisation of education for ethical understanding aims. Prior to beginning the first interview, students were asked to offer definitions for the words, ethical, moral, and values. It became evident that students were unfamiliar with the terms ethical and moral, but were familiar with the definition of values; this prior knowledge was taken into account and applied accordingly throughout each of the group interviews.

To gain a deeper understanding of students' perceptions of the aims of values education, how this might be achieved, the role of animals in values development and how human-animal relationships might contribute to reaching values education aims, four targeted questions were included in each interview. A sample of responses to each question are provided in this section and details of the analysis of responses is outlined in Table 5.13.

Question 1. What do you think the following terms mean?

(a) Ethical

INTERVIEW 1:

No suggestions were offered by students.

INTERVIEW 2:

- *To do the right thing, or act the right way. (S008)*
- *Yes, and it is like if you are unethical you are a cheat or a liar. (S001)*

(b) Empathy

INTERVIEW 1:

- *When you feel sorry for someone. (S008)*
- *Is that like sympathy? (S012)*

INTERVIEW 2:

- *When you know someone is sad and you feel sad too. Like in the book, Parker felt sad about the girl. (S008)*
- *I get upset when my friends are fighting, is that the same thing? (S006)*

(c) Humane

INTERVIEW 1:

- *When we go hunting we have to kill wallabies humanely, like quickly I think. (S003)*
- *That can't be the same, it is something to do with humans. (S004)*

INTERVIEW 2:

- *I asked my dad about the wallabies, he said it means to kill them kindly, so they don't suffer. (S003)*
- *We learned about the asylum seekers coming to Australia, and that where they are kept is not humane, so now I know what it means. (S010)*

(d) Moral development

INTERVIEW 1:

- *Developing morals.* (S007)

INTERVIEW 2:

- *I think it is how you grow up to be good, not a bad person.* (S002)
- *Yes, you learn how to do the right thing all the time.* (S009)

(e) Values education

INTERVIEW 1:

- *Haven't heard of it.* (S011)
- *Not sure really.* (S009)
- *Is that like our school values that we learn about at the start of the year?*
(S005)

INTERVIEW 2:

- *It is following what we learned in 'Spirits', the values of the classroom and school.* (S006)
- *And out of school too, different people have different values.* (S008)

During the first interview, students were asked the following question to further assess the current level of understanding relating to ethical concepts:

(Question by researcher). Can you give me an example of an ethical decision that you may need to make?

Responses to the question were tentative and limited. A sample of answers show varying degrees of understanding.

INTERVIEW 1:

- *Choosing what friend is going to be your partner for a school project.* (S008)
- *Who you will sit with or work with.* (S006)
- *Whether to go to school.* (S010)
- *Whether to tell a secret, or the truth.* (S007)
- *Choosing between which clubs you want to play sports for.* (S002)

In order to provide clarification of the meaning of the question, the researcher expanded on the question with the following explanation:

(Question by researcher). Sometimes we have to make ethical decisions; for example, imagine that you find \$10 in the playground and you really want to keep it but you know the right thing to do is to hand it into the school office.

How do you think your values influence ethical decisions?

INTERVIEW 1:

- *If you are honest, you make the right decision.* (S005)
- *If you are greedy, you might take it anyway.* (S010)
- *You put yourself in the other person's place and think what you would want you to do.* (S001)

- *When you have to choose you think how it would make you feel if it was you. (S007).*

When asked during the second interview, the same question triggered a similar conversation.

INTERVIEW 2:

- *You do the right thing if you have values. (S005)*
- *But if you need \$10 you might not anyway. (S010)*
- *If you are responsible, you know to do the right thing. (S004)*
- *Depends how loyal you are. (S009)*

Question 2. Moral education aims to support children’s development of knowledge, behaviour and emotions to make good decisions and act in a way that benefits everybody. How do you think this is achieved?

(a) Please give some examples of lessons, routines or activities at school that you think help you to develop the knowledge, behaviour and emotions to make good decisions and act in a way that benefits everybody?

INTERVIEW 1:

- *Spirits. (S009)*
- *Leaders. (S001)*

The first suggestion ‘Spirits’ refers to the School Wide Positive Behaviour Support (SWPBS) framework. The framework is designed to assist schools in planning and implementing behavioural support practices across the whole school, and to

improve educational and behaviour outcomes for all students. The school in the study uses the SWPBS to promote the expectations of values and attitudes, which include safety, learning, mutual respect, attitude, and encouraging others. For the purpose of this study and to protect the identity of the school, the name of the framework used by the school has been changed to Spirits. The second suggestion ‘Leaders’ refers to elected student representatives.

INTERVIEW 2:

- *There is a thing about bullying, that if you know it is happening but don't try to stop it you are just as bad as the bully. (S001)*
- *We do learn about it but also when you do something wrong you are asked to explain, or told how to do better next time. If you are mean to someone or whatever. (S009)*
- *Yes, so if everybody does the right thing at school we will all be happy, and safe. (S007).*
- *Doesn't stop people doing it though because if they want to be mean they still will, but not get caught. (S010).*

When asked to expand on what might stop people wanting to be mean, the student replied:

- *Usually someone has been mean to them first, so they learn to be mean too. You would have to teach little kids and grown- ups too I guess. (S010)*

(b) How do you think that your knowledge, behaviour and emotions are measured at school?

INTERVIEW 1:

- *By tests, for spelling and maths and writing. (S010)*
- *What you know is tested in Naplan, not sure about the others. (S008)*

INTERVIEW 2:

- *I don't know how it's measured but we do get comments on our reports about our behaviour. (S010).*
- *Teachers tell us if our behaviour has improved and some people get certificates for good behaviour or skills, so they must measure it on their opinion I think. (S008)*

Question 3. Do you think that learning about, and spending time with animals can help you develop the knowledge, behaviour and emotions needed to make good decisions and act in a way that benefits everybody?

(a) In what ways do you think learning about animals can help the development of ethical understanding?

INTERVIEW 1:

- *Maybe learning about animals helps you know how to treat them right, not sure. (S012)*
- *It is interesting, so you want to learn about it. (S007)*

INTERVIEW 2:

- *In the book [Wringer] it was about a pigeon but really it could have been about another boy or person, so reading how Parker thought about the pigeon made me think how I would act if I was him. (S008)*
- *Animals are kind to people and people, well most people, are kind to them. So maybe learning about animals could let people see how to be kind. A bit like in the book [Wringer]. (S007)*

(b) In what ways can spending time with animals help the development of ethical understanding?

INTERVIEW 1:

- *I spend time with my dog. (S011)*
- *If you don't have sisters or brothers you can spend time with your pets. (S002)*

INTERVIEW 2:

- *I have been thinking about this and I figured that if you spend time with your pets, you want to take care of them and look after them properly. So making them happy is important to you, and if you to make people happy it is the same I reckon. (S008)*
- *Maybe, and also if you help an animal or make it happy, it makes you feel good about yourself too. So you know how it feels to do the right things. (S002)*

Question 4. Do you learn about, or spend time with animals at school?

(a) What can you tell me about your experiences?

INTERVIEW 1:

- *Sometimes we do, like in projects about endangered species or so.*

(S005)

- *In the library there is an animal section. (S010)*

- *Not real animals but in stories we do. (S009)*

INTERVIEW 2:

- *I don't think we have any animals at school now. We had fish at primary school but we didn't learn about them really. I think they had names too.*

(S005)

- *I used to enjoy all the animal books but they don't have many for our age now. (S002)*

(b) In what ways do you think learning about animals or spending time with animals can help you develop the knowledge, behaviour and emotions needed to make good decisions and act in a way that benefits everybody?

INTERVIEW 1:

- *Most people like animals, so maybe that way. (S002)*

- *Yes, if you like something you want to learn about it too. (S008)*

INTERVIEW 2:

- *I think like in the book [Winger] and also on the news stories, sometimes people are cruel to animals and they discuss how it is wrong or how it could be improved. (S008)*
- *Yes, and they show two sides of the story, just like when we were learning about asylum seekers and we had to decide which side we were on or come up with a different solution. (S010)*

Having performed content analysis on transcribed responses to the four questions addressing the objectives of the study, further analysis was conducted on responses that occurred during discussion not directly related to the interview questions. The combined analyses of interview and discussion responses revealed three emergent themes relevant to the research focus. These themes are summarised in Table 5.13 and discussed further below.

Table 5.13

Thematic Categorisation of Students' Responses to Group Interviews

Themes	Description	Typical Response
Values development	<ul style="list-style-type: none"> • Process of learning values. • Activities that teach values. 	They learn them from people around them, like friends or family.
Values relating to animals	<ul style="list-style-type: none"> • Skills acquired by caring for pets. • Behaviours or emotions relating to animals. 	<ul style="list-style-type: none"> • How you take care of them; responsibility. • Loyalty.
Importance of values	<ul style="list-style-type: none"> • External reasons for having values. 	<ul style="list-style-type: none"> • To make good decisions.

development	<ul style="list-style-type: none"> • Personal benefits of learning values. 	<ul style="list-style-type: none"> • So that people like you.
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Development of Values

Analysis of the responses from the first group interview, revealed that students' ideas regarding how values are acquired reflected a social- constructivist framework. Responses included:

- *From people around them.* (S007)
- *They learn from people around them, friends or family.* (S005)
- *Yes from family and grown-ups.* (S009)

In the second group interview, several students were more forthcoming and in addition to the repeated ideas from the first interview, other responses included:

- *Role models.* (S007)
- *Who you grow up with.* (S009)

Two students suggested that values are learned through behaviour:

- *By how they treat people.* (S002)
- *Or by how people treat you.* (S006)

One student touched on environmental factors by offering:

- *Your surroundings.* (S003)

Discussion relating to activities undertaken at school that may influence values development was limited to two examples of classroom-based learning programs which were regularly timetabled learning activities. Responses from the

second interview included the two original suggestions and the additional examples of:

- *Sport.* (S006)
- *Responsibilities.* (S004)
- *Teams.* (S008)

Values Relating to Animals

The analysis of discussion surrounding values relating to animals from the first group interview revealed that students' responses represented either values-based or welfare-based perspectives. Values-based responses typically included reference to emotional factors or personal beliefs. Welfare-based responses focused on aspects of wellbeing with reference to factors such as nutrition or harm. Question by researcher. Do you think that animals can help children learn about values, if so, how? All students agreed that animals could help children learn about animals. When asked for examples, the values-based suggestions given included:

- *Friendship.* (S008)
- *Loyalty.* (S007)
- *How to treat people.* (S002)
- *Love.* (S003)
- *By learning what is best for them.* (S001)
- *Not hurting them.* (S007)
- *Caring for them.* (S008)

- *Treating them right.* (S012)
- *Being kind to them.* (S007)
- *Putting them first.* (S010)

Welfare-based suggestions included:

- *Not hurting them.* (S007)
- *Feeding them properly.* (S003)
- *Looking after them.* (S004)
- *Making sure they are alright.* (S010)

Responses from the second group interview were primarily values-based, which included:

- *How you treat them with love.* (S001)
- *How you take care of them, responsibilities.* (S005)
- *Being kind to them.* (S007)
- *Respecting them.* (S009)
- *Loving them and taking proper care of them.* (S003)
- *Compassion.* (S004)
- *Putting them first.* (S010)
- *Kindness.* (S011)
- *Being kind.* (S012)
- *All of the above.* (S002)

Purpose of Values

Responses relating to the purpose of values development generated during the first group interview revealed an overall agreement within the group that values were important. Discussion regarding the reasons for this response was limited to three responses:

- *If you don't you will have a miserable life. (S008)*
- *Nobody will like you or want to be friends. (S004)*
- *You won't be a nice person. (S002)*

Responses from the second group interview included:

- *To make the right decisions. (S002)*
- *You need to learn them for when you grow up. (S008)*
- *So when you are older you make good decisions. (S004)*

5.8 Summary of Chapter 5

This chapter has reported findings gathered from the analysis of quantitative and qualitative data. The data were presented using four dimensions of ethical understanding, attitudes towards animals, and student perspectives on values development. Section 5.1 described demographic data. Sections 5.2 – 5.5 reported quantitative data relating to ethical judgement, ethical sensitivity, and ethical character. Section 5.6 presented qualitative data providing insights into ethical identity. Section 5.7 presented quantitative data concerning attitudes towards animals. Sections 5.8 reported correlations between instruments. Section 5.9

presented student perspectives on values development. The following chapter presents a discussion of these results in relation to the research questions and the research literature.

CHAPTER 6

DISCUSSION

The previous chapter reported the results obtained through the quantitative and qualitative data analyses processes. This chapter discusses the key findings in relation to the three research questions and the research literature.

6.1 Key Findings

There were nine key findings which were derived from this research. First, a review of the literature identified four aims of education (subsection 2.7.1) designed to foster the promotion of ethical judgement, ethical sensitivity, ethical character, and ethical identity as four dimensions of ethical understanding.

Secondly, a summary of the implicit and explicit aims and outcomes of animal-focused educational strategies (table 3.1) revealed strong relevance to the development of ethical understanding.

Thirdly, the analysis of the results of the DIT-2 showed that moral schema scores were consistent with norms established by Bebeau and Thoma (2003). Moral schema type categories were higher for females and were distributed more widely than for males. Post-test P scores increased in the majority (73%) of students and post-test N2 scores increased for the majority (82%) of students, with males showing greatest increase. These findings indicate that there was an active period of ethical judgement development during the six-week period of the study.

Fourthly, results gained from the analysis of pre-test post-test GEM-PR scores revealed a significant increase in overall empathy scores for the whole student sample. Pre-test scores of affective empathy were higher for females; however, males showed the greatest increase in both affective and cognitive empathy post-test scores. These findings indicate that males in the sample for this study were more receptive to the content and activities explored as part of the ASLP.

Fifthly, findings from the EUCQ reveal that when assessed against the Australian curriculum general capability Ethical Understanding learning continuum, approximately half (51%) of the year 7 and year 8 students in this study were not achieving at the standard expected for year 6 students. An analysis of the Australian curriculum general capability Ethical Understanding learning continuum criteria indicators revealed that of the 16 indicators, Indicator 9 was not being achieved at the standard expected, Indicator 10 was being performed above the standard expected, and the remaining 14 Indicators were being achieved at the standard expected for year 6. These findings indicate that teachers' perceptions of ethical character did not reflect the students' achievement on other measures.

Sixthly, findings that emerged from the content analysis of students' written responses to the ASLP revealed that students portrayed five distinct levels of ethical identity and that the most frequent level demonstrated by students was the mid-level. These findings indicate that the ASLP written reflection tasks were effective in revealing insights into students' perceptions of ethical identity.

Seventhly, content analysis of group interviews revealed three emergent themes. The themes were categorised as values development, values related to animals, and purpose of values. Findings indicate that students in the sample for this study were developing a basic understanding of concepts and issues in relation to values acquisition and development, but demonstrated a greater understanding of values in relation to animals. These findings also indicated that human-animal relationships play a role in children's understanding of values.

Eighthly, in this sample of students, attitudes towards animals were positive with all pre-test results reflecting medium or high scores. Results at post-test showed a statistically significant difference with 100% of students completing the ASLP achieving increased scores. These findings reveal that for the sample of students in this study, positive attitudes towards animals were a weak indicator of performance on other measures.

Finally, the investigation into relationships between positive attitudes towards animals and the results of the DIT-2, GEM-PR, and EUCQ did not identify any significant correlations.

The findings revealed diverse results across the six individual measures and between individual participant scores. Comparisons between pre-test and post-test results indicate active development in identifiable areas. In the following sections, the combined findings are discussed in relation to the three research questions and relevant research literature.

6.2 Discussion Relating to RQ1

RQ1. What are the aims and approaches of animal-focused educational strategies?

The first research question was addressed through the critical examination of existing literature relating to the implicit and explicit aims and desired outcomes of prevalent approaches to animal-focused educational strategies. The findings of the critical review were summarised in Literature Review Part B and presented in Table 3.1. An exploration of theories of moral development, existing and emerging approaches to moral education, and in the Australian context, the documents and policies guiding moral education curriculum and practice, provided further context to the aims for educational strategies for the promotion of ethical understanding. Through this process, it emerged that the aims of moral education are shaped by context, policy and community expectations, which is reflected in the absence of definitive aims. Despite variation in aims, there was consistency between sources in the identification of the need for aims to address a number of identified skills, dispositions, knowledge, and behaviours. These characteristics are broadly categorised as relating to ethical judgement, ethical sensitivity, ethical character and ethical identity. In recognition of this, a summary of the aims of education drawn from a synthesis of the reviewed literature was presented in subsection 2.7.1.

The summary of the aims and outcomes of animal-focused educational strategies presented in Table 3.1 revealed that stated aims and desired outcomes of

prevalent approaches can be seen to bear direct relevance to each of the dimensions of ethical judgement, ethical sensitivity, ethical character, and ethical identity. However, the explicit intention to foster the development of ethical understanding is not currently evident within the stated aims. The absence of this explicit focus indicates that the capacity of animal-focused educational strategies to contribute to the development of ethical understanding remains untapped. A greater awareness of this contribution presents additional opportunities to educators and students, and for the design, implementation, and researching of animal-focused educational strategies.

6.3 Discussion Relating to RQ2

RQ2. What role can human-animal relationships play in fostering the development of ethical understanding in children?

Having discussed the findings relating to the aims and approaches to animal-focused educational strategies, this section expands on these understandings to consider the findings related to the role of human-animal relationships in the development of individual dimensions of ethical understanding.

The objective of this aspect of the research study was to explore the influence of children's attitudes towards animals on the individual dimensions of ethical understanding. The primary instrument used to measure students' attitudes towards animals was the quantitative PAS-M self-report questionnaire. Further

insights were gained into attitudes towards animals through the responses to animal related questions in the GEM-PR, EUCQ, ASLP, and group interviews.

In this study, PAS-M results showed a significant difference between pre-test and post-test scores, with 92% of the sample showing increased scores. Interestingly, the one student with an unchanged score did not engage in the ASLP reading or writing activities due to an extended absence. Although previous studies of humane education are not generally focused on gender specific outcomes, a study by Nicoll et al., (2008) reported correlations between gender and scores on the Pet Attitude Scale, showing that females scored higher than males. However, as the scores provided in the study combined pre-test and post-test scores it was not possible to identify the effect value for gender. It has been argued that differences in gender attitudes are dependent on the type of animal under consideration, with females showing more favourable attitudes towards companion animals and males showing a preference for wild or exotic species (Bjerke et al., 1998). In this current study, male and female students attained similar scores, increases and effect values. Future research is required to examine the age at which gender differences become apparent and the factors that influence this change.

In previous studies, it has been suggested that there is a relationship between age and decreasing positive attitudes towards animals, with attitudes becoming less positive during adolescence (Muldoon, Williams, Lawrence, Lakestani, &

Currie, 2009). For this reason, it is often recommended that humane education interventions are targeted at preadolescent children, during the period before positive attitudes towards animals decline. In this study, both age groups show increased scores and there was no significant difference in scores between the younger and older age groups. Kellert and Felthous (1985) suggested that children move through three developmental stages (from exploitative responses to emotional, and then to ethical) and that these need to be taken into account in the design of educational programmes.

The findings of this study support the multidimensional nature of ethical understanding. In the following sections, discussion focuses on the findings relevant to the separate dimensions of ethical judgement, ethical sensitivity, ethical character, and ethical identity.

6.3.1 Ethical Judgement

The ethical judgement dimension emphasises the selection process of choosing one action over another. This skill is concerned with thinking through recognised ethical challenges and determining a preferred course of action. In the current study, the quantitative DIT-2 online survey was used to assess students' levels of ethical judgement. Through this measure, participants were asked to rate and rank responses to ethical dilemma scenarios. The results of this process revealed insights into the development of ethical judgement in early adolescence. Previous research indicates that individuals progress through recognisable levels

of ethical judgement development as they mature, and that this progression is sensitive to the influences of schooling and ethics education programs (Rest & Narvaez, 1994; Rest et al., 1999). A higher level of ethical development is considered to exist when more mature systems of reasoning are used as justifications for actions, even when engaging in the same action that could be justified by lower reasons. Ethical judgement is not synonymous with matching a recognised challenge with a rule or theory that defines the best solution; rather, levels of ethical maturity are suggested, and the selection of proposed action based on sophisticated theoretical reasoning is judged to represent a higher stage of ethical development than reasoning at a lower level.

The results of this study showed that for this sample, pre-test and post-test mean scores were consistent with DIT-2 norms established by Bebeau and Thoma (2003). As seen in work by Hardy and Carlo (2005, 2011), early adolescence was identified as a period of active ethical development. The post-test increase in moral schema scores for 82% of the sample in this study indicated that an active period of ethical judgement development occurred during the course of the research program. The increase in P and N2 scores, suggested that students were beginning to view and consider ethical issues from perspectives other than their own. Although an increase in P and N2 scores are the primary indicators of an individual's ethical judgement, it is important to recognise that students with low P and N2 scores who showed a decrease in stage 2/3 and corresponding increase in

stage 4 scores were also demonstrating a move toward higher levels of development. An increase in U scores for the nine students participating in both administrations of the DIT-2 suggested that students were becoming more aware of their own moral position when making ethical decisions. Learning to see moral dilemmas from alternative perspectives and being able to draw upon personal moral schemas in the decision-making process helps students to identify, articulate, and reflect critically on ethical issues from their own perspective as well as that of others.

Gender differences in the development of ethical judgement were also investigated. Much of the literature reports no significant difference between male and female scores at this age group, although gender differences are apparent at later levels of education and in adulthood (Bebeau, 2002). In this study, there were no significant gender differences in scores; however, it is worth noting that males showed a greater increase in P scores than females. The difference between gender P score increases indicates greater ethical judgement developmental activity in males over the period of the study and suggested that male participants might be more sensitive to the ASLP. Gender differences were apparent in primary moral schema type scores, with the results for males being restricted to Type 2 and 3, in comparison to female results that ranged between Type 1 and Type 7.

As seen in work by Rest and Narvaez (1994), when age was studied in isolation to all other factors, there was no evidence to suggest a relationship

between age and level of ethical development. In this current study, there were no significant differences between the results of the 12-year-old and 13-year-old age groups. These results were expected based on the literature; however, the limited age difference of participants (maximum possible difference being 18 months) and the small number of participants in the 12-year-old age group may have further weakened the relationship between age and ethical judgement in this case.

In this study, a more complete picture of the participant's positioning within the stages of ethical judgement was achieved through examination of the combined results of the moral schema scores, primary moral schema type categories, U scores, and undecided score than could have been achieved by reporting only P and N2 scores. The DIT-2 is a schema-based model that represents moral development as a progressively ordered set of schemas. These schemas define the network of knowledge that is organised around particular life events and exist to ASLP individuals understand new information based on prior experiences (Rest et al., 1999). In this view, moral schemas are contextual, automatic, and less reflective than Kohlberg's stages. Furthermore, DIT-2 researchers explained that schemas may not be explicitly understood by the individual, and may operate at the tacit level; thus, the DIT-2 is considered as a device for activating moral schema. More specifically, the schemas measured by the DIT-2 are viewed as a default system that is evoked when other, more automatic and context-specific, interpretive systems fail or provide inconsistent

information (Narvaez & Bock, 2002). The fact that schemas operate at a tacit level may offer an explanation as to why students were able to select the appropriate response to an ethical dilemma but were less able to justify the reason for doing so.

The validity of the DIT-2 instrument is dependent on the participants' honest and accurate responses. A significant limitation of the DIT-2 is the assumption that the participants in this study understood the survey questions, and answered them thoughtfully and truthfully. Although the questionnaire has a sample question to familiarise participants with the test format, the DIT-2 is an extensive task with multiple columns and several options to consider and rank. This format increases the risk of disengagement with the task, resulting in unreliable survey results. In addition to validity checks performed during the analysis process, supplementary actions were taken to mitigate the limitations. Verbal and written instructions were provided to ensure participants understood how to complete the questionnaire correctly and accurately, the researcher remained available to answer questions during administration of the DIT-2, and an unlimited timeframe for completion of the questionnaire was provided. Although the additional actions were employed with the intention to increase reliability, it was not assumed that all answers given were honest or accurate.

Further insights into ethical judgement were gained through the analysis of student scores on the EUCQ. Although primarily designed to gain teachers' perceptions of observable aspects of ethical character, the instrument included

several indicators directly related to ethical judgement. The EUCQ required each teacher to assess each student on his/her level of achievement according to level 4 of the general capability of Ethical Understanding, which is the level typically expected by the end of year 6. Pre-test and post-test whole sample mean scores provided by each teacher were analysed to identify the level of student achievement in each indicator based on their observations of the students' during the current school year. The results revealed similarities and variances between teacher scores for individual indicators. Each indicator is discussed within the relevant sections of this chapter. This first section is focused on the indicators related to ethical judgement; indicators 1, 3, 4, 5, 7, 9, 10, and 16.

Indicator 1. Explains ethical concepts such as truth and justice that contribute to the achievement of a particular outcome.

Indicator 3. Explains what constitutes an ethically better or worse outcome and how it might be accomplished.

The scores of each teacher for indicators 1 and 3 position the majority of students as performing at the standard expected for level 4.

Indicator 4. Understands the consequences for individuals of the actions of others, in a range of scenarios.

The scores provided by both teachers for this indicator position the sample of students as performing above the standard expected for level 4. This is the only indicator assessed as being performed above the standard expected.

Indicator 5. Explains the reasons behind there being a variety of ethical positions on a social issue.

Indicator 7. Explains the consequences of actions in familiar and hypothetical scenarios.

The scores of each teacher for indicators 5 and 7 position the majority of students as performing at the standard expected for level 4.

Indicator 9. Articulates a range of ethical responses to situations in various social contexts.

This indicator received the lowest score with T1 scoring 21 (below standard expected at level 4), whereas T2 scored at the expected level. The disparity between scores suggests that teachers' observations of the demonstration of this indicator were subjective. Receiving the lowest score indicates that although the majority of students in this sample were identified as achieving at the expected level for indicators relating to the understanding of ethical judgements, this knowledge was not being observed as articulated within a social context. This is consistent with Kohlberg's (1987) concern that cognitive capacities in ethical judgement and reasoning alone is not a reliable indicator of ethical action or behaviour (p. 272). This highlights the multidimensional nature of ethical understanding and supports the importance of approaches to teaching and assessment that recognise multidimensional development of ethical understanding.

Further evidence of the need for differentiation is provided by the findings for Indicator 10.

Indicator 10. Able to weigh the merits of actions to prevent harm to animals. Indicator 10 scored the highest scores of all 16 indicators. Each teacher assessed all students as performing above the standard expected, with T1 scoring all students at well above the standard expected for level 4. Interestingly, indicators 9 and 10, which received the lowest and highest scores respectively, are the two indicators provided to inform the ethical understanding organising element ‘reasoning in decision-making and actions’ capability to ‘reflect on ethical action’. The difference in achievement of alternative indicators for the same capability demonstrates the need for varied opportunities for assessment.

Indicator 16. Identifies biased research findings. The scores of each teacher for indicator 16 position the majority of students as performing at the standard expected for level 4.

The assessment of the learning continuum capability indicators relating to ethical judgement reveal that the majority of the year 7 and year 8 students in the sample for this study were operating at the standard of ethical judgement expected for year 6. This finding is not consistent with the findings of the DIT-2, which reported that the majority of students demonstrated a level of ethical judgement comparable to norms established for the same age group by Bebeau and Thoma (2003). The difference between results indicates that assessment of ethical

judgement by teachers is influenced by individual perceptions of observable capabilities.

Further insights into ethical judgement were gained through the analysis of students' responses to questions asked by the interviewer during each of the group interviews. During the first interview, students were asked the following question:

(Question by researcher). Can you give me an example of an ethical decision that you may need to make?

Initially, responses to the question were tentative and limited to decisions related to social relationships. The researcher then provided a clarification of what comprises an ethical decision, which provoked further responses by the participants. The responses included the suggestion that ethical decision-making might be influenced by certain characteristics and attributes. Honesty and greed were mentioned as characteristics that determine whether a person decides to make an ethical choice. Attributes relating to perspective taking and empathy were considered to contribute to the ethical decision-making process.

Interestingly, when asked during the second interview, the same question elicited similar responses but with the inclusion of the recognition that an individual might understand what the most ethical decision ought to be, but still choose to make a different decision.

In contrast to the results of the DIT-2 and the scores of the EUCQ, which both indicate that the majority of students within the sample were capable of the

level of ethical judgement expected at the age level, the capability was not demonstrated through student responses during the group interviews. The conflicting findings indicate that students were less able or willing to articulate ethical reasoning verbally than they were in a written format. The implication of this finding is that assessment practices that rely on verbal demonstration of ethical judgement might not represent an accurate level of students' capability in this dimension.

6.3.2 Ethical Sensitivity

In this current study, insights into the dimension of ethical sensitivity were gathered through the analysis of four instruments; the GEM-PR, the EUCQ, the ASLP, and two group interviews. The GEM-PR quantitative questionnaire provided information surrounding parents and carers' perceptions of children's empathy levels. Previous work in the field of Humane Education has shown that empathy levels are positively influenced through HEP interventions (Arbour et al., 2009; Ascione & Weber, 1996). The results of the sample in this study showed a significant increase in scores of cognitive and overall empathy between pre-test and post-test administrations; therefore, the findings of this current study were consistent with previous research.

Existing studies focused on the empathy development of male and female adolescents have shown that females generally achieve higher scores on measures of empathy than do males (Cohen & Strayer, 1996; Eisenberg & Fabes, 1998). In

this study, the findings showed that although females had higher scores in cognitive, affective and overall empathy in both administrations of the test, male students achieved the greatest post-test increase in cognitive empathy scores, and showed a large effect value for both cognitive and affective empathy. No statistical differences between age groups for pre-test and post-test scores were indicated, although scores for the 13-year-old age group were higher at pre-test. Both age groups showed a large effect value for cognitive empathy and a medium effect value for affective empathy. The limited age difference of students (maximum possible difference being 18 months) and the small number of participants in the 12-year-old age group may have diminished a possible relationship between age and ethical sensitivity in this case.

Further insights into ethical sensitivity were offered through the analysis of each teacher's assessment of student achievement on specific indicators of the EUCQ. Of the 16 indicators included on the EUCQ, two indicators were explicitly directed towards the assessment of aspects of ethical sensitivity; indicators 12 and 15.

Indicator 12. Recognises instances where equality, fairness, dignity and non-discrimination are required.

Indicator 15. Explains a range of possible interpretations and points of view when thinking about ethical dilemmas.

The scores of each teacher for indicators 12 and 15 positioned the majority of students as demonstrating a level of ethical sensitivity at the standard expected for level 4.

Additional understandings of students' empathy levels were gained through the analysis of the written responses provided within the ASLP. The ASLP was created by the researcher with the inclusion of three questions designed to gather insights into students' ethical sensitivity. A sample of verbatim answers provided in subsection 5.4.1 illustrated the diversity of responses.

The first question referred to an incident in the story involving a birthday tradition amongst the group of the boys. The question required participants to articulate how they might feel if they were in the same situation as 'Palmer'. The responses to the question reflected varying degrees of ethical sensitivity ranging from little or no evidence of empathy through to more developed levels of ethical sensitivity. Responses at the low level focused on how they might avoid the situation or what action they might take if they were in the same position. No indication of an emotional response was evident. The second level revealed some degree of emotional response such as fear; however, there was an emphasis on the perceived physical consequences of the action including pain or soreness. The final level was distinguished by evidence of an awareness of the emotional consequences of the action and the role of perspective taking in understanding the situation.

The second question asked students to reflect on their own feelings about a familiar scenario.

Q17. How do you feel when other people get in trouble?

An analysis of responses to Q17 revealed that students' answers reflected two levels of response. Characteristics of the first level were that the comment is self-focused, and based on the desire to follow rules or authority. At this level, it was common for responses to focus on punishment or consequences, and apportioning blame to others. Similarly, several comments either involved character judgements related to the perception that the people who get in trouble made a poor decision in doing wrong, or were lacking in the ability to conceal their wrongdoing. In each case, comments indicated that the wrongdoer was deserving of the consequences. The second levels of responses focused on self-interests, and were dependent on external factors such as the situation or the individual involved. Typically, responses at this level differentiated between friends and non-friends, with several comments stating that a sympathetic reaction was dependent on the closeness of the relationship with the friend.

The third question required students to comprehend the actions of the character and to predict the consequences of his actions by recognising a situation as being an ethical conflict.

Q21. Palmer has allowed his emotions to build during the last sections of the book. How do his emotions explode in chapter 32? Predict how the boys in the gang will react to him now.

The responses to Q21 revealed differing levels of understanding. Several students misinterpreted the situation and focused solely on the result of the conflict, the reason that the conflict occurred, and what might happen next. However, other students identified the ethical dilemma experienced by the character, recognised the emotions involved, and offered suggestions relating to the decision reached.

The GEM-PR included two questions related to empathy directed to animals. Question 2 asked parents and carers to indicate on a scale of -4 (strongly disagree) to +4 (strongly agree), the extent to which they agreed or disagreed with the following statement:

Question 2. My child treats dogs and cats as though they have feelings like people.

Analysis of the results for question 2 showed that scores for all students were within the positive range with 50% scoring + 1 or + 2, and 50% scoring +3 or +4. The scores were consistent for both administrations of the questionnaire. These positive results were expected and reflect the positive attitudes recorded by the PAS-M.

The second question related to animals on the GEM-PR was question 18, which consisted of the following statement:

Question 18. My child gets upset when he/she sees an animal being hurt.

Results for this question were again in the positive range, with all students scoring +1, +2 or +4. The scores were consistent for both administrations. Interestingly, a question on the GEM-PR that was not related to animals provided further valuable insights into children's empathy, this being Question 12 which consisted of the same statement as question 18 but with the exchange of child rather than animal:

Question 12. My child gets upset when he/she sees another child being hurt.

This question revealed different results with 18% scoring 0, 32% scoring +1 or +2, and 40% scoring +3 or +4. A comparison between question 12 (child related) and question 18 (animal related) shows that 50% of students scored higher for animals than child, 45% scored equally, and just 5% scored child higher than animals.

The findings of this current study revealed the individual developmental nature of cognitive and affective components of empathy, which was consistent with established models of empathy development (Dadds et al., 2008) and reinforced the importance of using measures that differentiate these constructs of ethical sensitivity.

6.3.3 Ethical Character

The objective of this dimension of the study was to explore teachers' assessments based on observations of students' ethical character according to the Australian Curriculum. In this study a quantitative questionnaire was used to gather teachers' assessment of student's ethical character. Allow teachers to

quantify their perceptions of students' ethical character. At the time of completing this current study there were no previous studies focused on teacher assessment of ethical character in early adolescence available to enable the comparison of results. However, as the questionnaire effectively outlines the expected level of achievement, results are discussed in relation to student performance. The findings of this study revealed that, according to teacher's perceptions, approximately half of the sample had not achieved the expected standard ethical understanding for year 6. Although teachers' scores for individuals, genders, and ages differed, there were no significant differences or noteworthy patterns.

As discussed in subsection 6.3.1 and subsection 6.3.2 several of the indicators of ethical understanding on the EUCQ were directly related to ethical judgement and to ethical sensitivity, the remaining indicators can be regarded as observable capabilities relating to ethical character. The analysis of the EUCQ indicators of ethical character showed similarities and differences between each teacher's scores.

Indicator 2. Understands the difference between an honest mistake and intentional deception.

Indicator 8. Understands possible consequences of including or excluding a person or a group.

The scores for each teacher indicated that the majority of students in the sample were performing above the standard expected for level 4.

Indicator 13. Demonstrates consistency between rights and responsibilities when interacting face-to-face or through social media.

The scores for each teacher indicated that the majority of students in the sample were performing at the standard expected for level 4.

Indicator 6. Recognises conflicting media reports about the same event. Scores for these indicators showed that T1 assessed the majority of students as approaching the standard expected. In contrast, T1 assessed the majority of students as performing at the standard expected for level 4.

Indicator 11. Identifies values accepted and enacted within various communities.

Indicator 14. Understands the difference between freedom of speech and destructive criticism in debates or through social media

Scores for indicators 11 and 14 showed that T1 positioned the majority of students at performing below the standard expected. In contrast, T2 assessed the majority of students as performing at the standard expected for level 4.

The variation between the assessments of ethical character provided by each teacher indicated that the measurements of observable capabilities of ethical character are subject to individual perceptions.

In addition to the quantitative findings provided by the GEM-PR, further insights into the role of human-animal relationships in children's ethical understanding were gained from the qualitative findings drawn from two group

interviews. The analysis of students' replies to interview questions and comments made during interview discussions revealed that responses relating to animals were broadly divided into welfare-based and values-based ideas. Further than just revealing attitudes towards animals, responses revealed deeper insights into students ethical position in relation to animals. Samples of verbatim responses provided in subsection 5.1.1 illustrated the range of student responses.

During the first interview, a discussion surrounding what people can learn from animals gave rise to the following question:

(Question by researcher). What can animals teach about values?

The question stimulated numerous suggestions, the majority of which reflected either a welfare-based or a values-based orientation. Responses categorised as welfare-based also reflected ethical decision-making or ethical judgement, for example choosing: prioritising others over one's self, can be viewed as deciding to put their welfare first over and above the choice not to. Likewise, stipulating that there was a choice to either hurt or not hurt animals indicated a conscious ethical decision between the choice of hurting or not hurting an animal. This awareness of personal choice in the treatment of animals was also evident in a response regarding feeding pets. Rather than simply stating the importance of feeding animals, the response placed an emphasis on feeding properly, which indicated an understanding of the importance of the correct or appropriate way to provide

nutrition to satisfy the needs of the animal beyond the act of merely providing food to sustain life.

Responses reflecting a values-based orientation included emotional or affective aspects, including love, care, kindness, loyalty, and compassion.

Interestingly, students were more willing to express emotional language in response to an animal-focused context than in a human-focused context. This finding was particularly relevant to the assessment of ethical character as it indicated that students' demonstration of indicators of ethical character were dependent on context.

6.3.4 Ethical Identity

Ethical identity was assessed using a qualitative written literacy task to elicit students' articulation of ethical identity. The results of this process revealed insights into children's ethical identity development. Research has indicated that the use of ethical terms to describe and evaluate the self typically increases in early adolescence (Damon & Hart, 1988; Hardy & Carlo, 2005). The work of Damon and Hart (1988) found that by early adolescence individuals' self-descriptions began to reflect a concern for others. By middle to late adolescence, these descriptions began to become embedded into the self (pp. 117–122). Further, early adolescents began to refer to their ethical self when justifying ethical decisions or judgements (Power & Khmelkov, 1998). In the sample in this study, evidence of ethical identity was revealed through students' responses to the ASLP. The ASLP

included three questions designed to elicit responses related to ethical identity.

These three questions are discussed in this section.

Question 11. Have you ever been mean to someone when you felt uncomfortable? If so, why do you think you were?

In this section of the book, a pigeon begins to visit Palmer and although Palmer is interested in interacting with the bird he is afraid of encouraging the bird to stay around the town because it will be in danger with Pigeon Shooting Day approaching. He refers to the pigeon as the world's dumbest bird and is torn between wanting to be kind and wanting to scare it away. The story describes his behaviour as 'mean'. Question 11 was included for the purpose of gaining insights into students' perceptions of their own ethical behaviour and the reasons for behaving in a particular way. Overall, the responses indicated that students were able to identify with the situation and offer suggestions for the character's behaviour. However, only a limited number of students articulated an understanding of the ability to empathise with the other person and to alter their own behaviour before reacting; thereby demonstrating a more developed sense of ethical self.

Question 14. Have you ever kept a secret about something somebody has done that you knew was wrong? How did it make you feel?

The responses to this question revealed that a number of students could relate to this scenario and were able to reflect on their feelings. In recognising the ethical

conflict between being asked to keep a secret and being aware of the foreseeable consequences of doing so, students suggested that they might experience feelings of guilt and discomfort through attempting to remain loyal and uphold the trust of the friend.

Question 26. How can you help to create change by your example. Make a list of at least three things that you could do.

This question was included to elicit students' awareness of their own ability to contribute to ethical action. Content analysis of the written responses revealed that responses reflected three distinct levels of ethical identity. The suggestions ranged between broad statements on charitable contributions, to more developed ideas reflecting agency in ethical action. Samples of verbatim quotes illustrating each level were presented in subsection 5.4.1.

Level 1 defines doing right as following the rules that have been distributed by authority figures. The reason for obeying these rules is often fear of punishment or an unquestioning regard for authority. Children at this stage also define the right as avoiding physical harm to objects or others. Responses at this level reflected a self-focused or pragmatic viewpoint. Participants at this level did not indicate a sense of self. Furthermore, these students did not refer to moral reasons or express personal meaning in their responses.

At level 3, the responses reflected the opinion that what was considered right is determined exclusively in terms of personal, or an individual's interest. Fairness

is an issue at this level, but is understood only in instrumental, concrete terms and is focused on serving the individual's needs, interests, and desires. At this stage, the individual is able to reflect on his own thoughts and feelings and is capable of understanding that other people may have different thoughts and feelings but is not proficient at adopting another's perspective. Participants at this level provided responses that reflected being influenced by extrinsic motivation rather than personal significance. External factors included teachers and friends. Participants at this level indicated an awareness of ethical choices but this did not extend into consideration for their ethical self. A common feature was that of reciprocity; justifying their own actions by how they would like to be treated themselves. Students were also conscious of possible consequences resulting from selected actions and the need to make an effort to act in the right way.

At level 5 the individual gains an awareness of the abstract thought processes of other persons. The ability to infer what others are thinking and feeling is employed when making moral decisions. The focus at this stage is to gain a sense of happiness or satisfaction, and moral decisions are framed in terms of upholding conventional human relationships. Responses at this level demonstrate significant evidence for ethical identity development. The distinguishing features of responses at this level are the references to self and intrinsic motivations. Level 5 responses also showed evidence of a broader appreciation of ethical values on a scale beyond concern for immediate relations. Students at this level of ethical

identity development were able to express a personal relevance of ethical values and intrinsic motivation for upholding them. There was also evidence of an awareness of the motivations of others, and recognition of the foreseeable consequences of actions taken by others. A further indication of this level was the demonstration of the willingness to act ethically despite pressure to the contrary by peers.

Previous studies have demonstrated that children are able to provide insights into ethical identity through explanatory responses to ethical concepts (Hart & Fegley, 1995; Reimer & Wade-Stein, 2004). Engaging students in composing written responses to a specific text provided them with the opportunity to reflect on ethical concepts and in doing so revealed insights into indicators of their ethical identity. A number of progressive indicators of ethical identity development were apparent, including intrinsic motivations for ethical action. Consistent with the work of Hart and Fegley (1995), and Reimer and Wade-Stein (2004) who examined verbal responses, the written responses provided by adolescents in this current study indicated evidence of ethical identity development during early adolescence.

Existing research has produced contrasting evidence for gender differences in the area of ethical identity. Although some studies have found no relationship between gender and development of ethical values (Aquino & Reed, 2002), other studies have revealed higher levels of ethical identity development for females

when compared to males (Hart, Atkins, & Ford, 1999; Kochanska, 2002). The findings of this current study identified no significant gender differences.

As discussed previously, early adolescence is considered a significant period for ethical identity development. In view of this, differences being the two age groups of the sample were expected; however, no significant differences occurred. The limited age difference between students and small sample size of the 12-year-old age group may have diminished the ability to identify differences in development.

In summary, findings relating to RQ2 identified that human-animal relationships play a role in the development of ethical judgement, ethical sensitivity, ethical character, and ethical identity. The absence of significant correlations between each of the dimensions confirmed the multidimensional nature of ethical understanding. The findings reinforce the importance of the aims of education for the promotion of ethical understanding to address each dimension, and for the teaching and assessment of ethical understanding to include multiple contexts and methods.

The discussion of findings in relation to the Research Question 1 and Research Question 2 concerned the aims of education for the promotion of ethical understanding, how such aims can be achieved, and the role of human-animal relationships in children's development of four dimensions of ethical

understanding. The discussion relating to the first two research questions provides a foundation for continuing discussion of Research Question 3.

6.4 Discussion Relating to RQ3

RQ3. How can the inclusion of Animal Studies within the Australian Curriculum contribute to the aims of education to foster the promotion of ethical understanding?

Having examined theories of moral development and recent research in moral education, scrutinised the guiding documents for values education in the Australian context, and considered the change in language surrounding moral constructs, a synthesis of the reviewed literature was used to identify four aims of education for the promotion of ethical understanding. The four aims were presented in subsection 2.7.1 and are now discussed in turn to address research question 3.

Aim 1. Promote ethical judgement through the skills of reasoning, decision-making and critical thinking, and a focus on explicit knowledge of ethical concepts and issues including rights and responsibilities of humans, non-humans, and entities.

The findings indicated that students' in the sample for this study, when presented with scenarios of ethical conflict relating to animals, were able to identify the conflict and to make ethical judgements based on their knowledge about and feelings towards animals. Further, the only indicator of reasoning in

decision-making and actions to reflect on ethical action was ‘able to weigh the merits of actions to prevent harm to animals’, in contrast, the indicator of the capability to ‘articulate a range of ethical responses to situations in various social contexts’ was below the standard expected.

Aim 2. Foster ethical sensitivity through the provision of opportunities to enact and practise perspective taking, empathy, compassion and emotional expression, and to identify an ethical response.

Finding 8 showed that the students in this study held positive attitudes towards animals. Further, findings from the GEM-PR revealed high levels of empathy with animals, and findings from the group interviews indicated that students drew upon experiences with animals to express emotions and relate to the feelings of others. These combined findings highlight the capacity for animal-focused learning opportunities to contribute to the development of ethical sensitivity.

Aim 3. Support ethical character through explicit acknowledgment of the value, purpose, and acquisition of recognised virtues, attributes, and dispositions to encourage personal values of honesty, resilience, and integrity; civic values of democracy, equity and fairness; and society values of acceptance and community engagement.

The findings from the EUCQ revealed that the most positively scored indicator was the one related to animals, suggesting that teachers had either

actually observed students' capability of weighing the merits of actions to prevent harm to animals, or that they held a perception that this was the case. In either case, this finding indicated the value of the inclusion of learning opportunities involving animal-focused content.

Further evidence of a potential contribution of animals was found in students' responses during group interviews. Examples of verbatim responses were provided in section 5.7 and in Table 5.13. Throughout the discussion, it was apparent that students were more able or more willing to articulate understandings of ethical concepts in relation to animals than in relation to non-animal contexts. This finding supported the value of curriculum-based Animal Studies as a method of promoting ethical character through a context demonstrated to be engaging and relevant to students in this sample.

Aim 4. Cultivate ethical identity to support individuals in recognising the link between ethical self and ethical action, and to understand their contribution to sustaining and improving natural and social environments, and in maintaining healthy and fulfilling lives.

Findings from the ASLP and group interviews provided insights into the potential contribution of Animal Studies to the ethical identity dimension of ethical understanding. The ASLP text and written literacy activities provided students with the opportunity to reflect on their responses to ethical concepts. Analysis of the responses provided insights into their ethical identity and to what

degree they perceive themselves to be ethical agents. The degrees of ethical identity were categorised into five developmental levels. A full description of each level is provided in Subsection 5.4.1. Identifying different levels of ethical identity within a small homogenous sample is consistent with the ideas of Blasi (1984), and Colby and Damon (1992) as an independent process of individualised personal growth. It appears that Animal Studies might serve as a vehicle to identify levels of ethical identity to determine suitable education for ethical understanding.

The findings of the current study highlighted the suitability of animal-focused educational strategies to contribute to the realisation of defined aims of education for the promotion of ethical understanding. In addition to this, it was evident that the findings support the potential contribution of Animal Studies to fulfilling the principles of good practice described by the *At the Heart of What We Do: Values Education at the Centre of Schooling* report (DEEWR, 2008, pp. 9-12).

Principle 1. Establish and consistently use a common and shared values language across the school.

The responses to the group interviews and the ASLP revealed that students consistently articulated values language when related to animals, more so than in relation to school or outside of school. Finding 3 and Finding 6 showed that the inclusion of curriculum-based Animal Studies would provide a platform for the introduction of language and vocabulary relating to ethical understanding that was transferred across all areas of learning.

Principle 2. Use pedagogies that are values-focused and student-centred within all curriculums.

Finding 7 and Finding 8 showed that animal-focused educational strategies, which consider the appropriate representation of animals and highlights values relating to animals, were likely to appeal to student's interests, be values-focused, and student-centred.

Principle 3. Develop values education as an integrated curriculum concept rather than as a program, event or an addition to the curriculum.

As a multidisciplinary field, Animal Studies offers opportunities to integrate ethical concepts in every curriculum area across all year levels. The curriculum-based ASLP used in this study demonstrates the suitability for classroom-based learning.

Principle 4. Explicitly teach values so students know what the values mean and how the values are lived.

Finding 7 showed that the student sample in this study were not explicitly aware of the purpose of values, how they were acquired, or the relevance of personal values to children. However, the sample demonstrated a more developed understanding of values in relation to animals than of values in other contexts. Animal Studies offers an age appropriate medium for explicit teaching about values relevant to children, especially in recognising different values and the ways in which people act on those values in daily lives.

Principle 5. Implicitly model values and explicitly foster the modelling of values.

Analysis of the group interviews revealed that students were able to identify a limited number of examples of role models and that teachers were not included in the suggestions provided. Finding 7 showed that the students in this sample drew upon experiences with animals to understand values. Animals Studies allows opportunities for educators to implicitly model values such as kindness, responsibility, respect, and compassion, and to foster modelling of values by students and adults.

Principle 6. Develop relevant and engaging values approaches connected to local and global contexts and which offer real opportunity for student agency.

Students' written responses to the ASLP included lists of suggestions for ethical action that could be taken by students. The lists indicated an understanding and interest in action. Finding 8 showed that students in the sample in this study had positive attitudes towards animals. This finding indicated that animal-focused contexts were likely to engage students in ethical reasoning, stimulate an empathetic response, and inspire authentic ethical decision-making. The availability of animal advocacy and welfare organisations including online environments and resources offers opportunities for students to be ethically active and to develop their personal ethical identity.

Principle 7. Use values education to foster intercultural understanding, social cohesion and social inclusion.

Intercultural understanding, social cohesion, and social inclusion rely on the development of ethical identity and an understanding of others. The ASLP used in this study explored concepts of otherness that are relevant to diverse examples of cultural and social understanding. Finding 6 showed that diversity exists in levels of ethical identity for the age group investigated in this study. The inclusion of curriculum-based Animal Studies provides opportunities to contribute to the development of ethical identity and an understanding of others.

Principle 8. Provide teachers with informed, sustained and targeted professional learning and foster their professional collaborations.

Finding 5 showed that the teaching and assessment of ethical understanding presents challenges to teachers. In particular, limited opportunities for teachers to observe and identify indicators of ethical understanding resulted in difficulties of accurate assessment. Professional development involving strategies for the inclusion of curriculum-based Animal Studies could provide teachers with opportunities to recognise and observe indicators of ethical understanding in students.

Principle 9. Encourage teachers to take risks in their approaches to values education.

The ASLP used in this study was an unfamiliar learning approach for the teachers and students. Finding 6 and Finding 8 showed that the approach achieved successful outcomes and was a positive contribution to existing approaches to values education at the school.

Principle 10. Gather and monitor data for continuous improvement in values education.

The analysis of students' written responses to the ASLP revealed distinct levels of ethical identity. Assessment of levels of ethical identity is useful in ascertaining appropriate learning needs of individual students. Students' responses during group interviews revealed that some students were more able to articulate their understanding of ethical concepts verbally than they were in the written responses. These combined findings indicated that Animal Studies offers an effective contribution to the teaching and assessment of ethical understanding.

6.5 Summary of Chapter 6

This chapter has provided a summary of the main findings and discussed the findings in relation to each research question and the literature. The following chapter revisits the research aims, methods, and procedures, and reflects upon the findings to have emerged from the study.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this final chapter is to revisit the research aims, methods, and procedures, and to reflect upon the findings that emerged from the study. The chapter begins with a summary of the study including reliability, validity and limitations before a summary of the findings is provided. Finally, conclusions drawn from the study are presented and recommendations for future consideration are proposed.

7.1 Summary of the Study

It has been claimed that the 21st century hailed a new paradigm for education. The demand for academic achievement, evident in the move towards the introduction of national curriculum, standardised testing and national assessment, has stimulated research concerning curriculum content and learning outcomes. At the same time, global and local calls for a focus on moral development have reignited research interest in moral education. Academic improvement and moral education are no longer considered mutually exclusive as emerging research indicates that values-based pedagogy contributes to the achievement of both outcomes. Despite the recognition of these dual objectives and clear declarations on the goals for education in Australia, there remains a lack of definitive aims for education to foster the promotion of ethical understanding and how such aims are to be realised. The 21st century has also welcomed a shift in societal attitudes towards animals, and their significant role in the lives of humans is increasingly

appreciated. Research has identified the positive contributions of animals to human health, and social and emotional wellbeing. The role of human-animal relationships on the development of ethical understanding has received less attention, and consideration of the role of animals in an educational context remains largely unexplored. This current study was designed and conducted to investigate the gap identified in the research literature. To do so, dominant aspects of inquiry were constructed to guide and inform the investigation, and support the collection of meaningful data. These aspects of inquiry were framed by the following research questions:

RQ1. What are the aims and approaches of animal-focused educational strategies?

RQ2. What role can human-animal relationships play in fostering the development of ethical understanding in children?

RQ3. How can the inclusion of Animal Studies within the Australian Curriculum contribute to the aims of education to foster the promotion of ethical understanding?

7.1.1 Reliability and Validity

Reliability and validity were enhanced through the selection of sampling strategies, data collection and management, and data analysis processes appropriate to the case study design. The use of established questionnaires (Defining Issues Test-2, Griffiths Empathy Measure-Parent Report, Pet Attitudes Scale-Modified) with proven content and construct validity, and test – re-test

reliability facilitated the initial assessment of the quality of the scores and the comparison with existing norms. The validity of the Animal Studies Literacy Program was enhanced through discussions with the participating teachers regarding the suitability for the reading and comprehension levels of the student participants. Member checking of group interview responses, and the use of verbatim quotes from the written answers to the Animal Studies Literacy Program contributed to an accurate and authentic representation of the participants' responses.

7.1.2 Limitations and Delimitations

Limitations related to quantitative and qualitative aspects of the study were described in Chapter 1 and Chapter 4. Additional delimitations, identified during the progress of the study, provide valuable direction for future research. The delimitations applied by the researcher were pragmatically selected to address the research questions whilst ensuring that the project remained manageable within the practical time and location constraints characteristic of a doctoral study undertaken by a sole researcher. The sample size of 12 students, 12 parents or carers, and 2 teachers was chosen to facilitate the inclusion of a potentially varied range of perceptions and richness of data. Although this sample number was appropriate for a small-scale case study, further insights might be gained from a larger sample size. A second delimitation was the absence of a control group. The presence of a control group would enhance the ability to draw conclusions from the comparison

of pre-test – post-test data and to account for the possibility of confounding variables. A further delimitation was the decision not to conduct interviews with parents and carers or teachers. It is anticipated that qualitative data collected from parents or carers and teachers, in the form of interviews or the opportunity to expand on questionnaire responses, would provide further insights into the teaching and assessment of ethical understanding.

7.1.3 Summary of Findings

The promotion of ethical understanding was found, from the literature, to require education that focuses on four key components: ethical judgement, ethical sensitivity, ethical character, and ethical identity. Education for ethics strategies that embrace an explicitly multidimensional approach to fostering the development of ethical understanding are likely to contribute to the successful achievement of curriculum outcomes. This finding informs teaching and assessment strategies, and the future design and content of curriculum. Additionally, a summary of the implicit and explicit aims and outcomes of animal-focused educational strategies revealed strong relevance to curriculum objectives for the development of ethical understanding. Awareness of approaches to ethics education that contribute to the achievement of curriculum aims is likely to improve outcomes for students. The inclusion of animal-focused educational strategies offers inclusive and engaging opportunities to achieve curriculum objectives for the development of ethical understanding.

The majority of students showed improvement in moral judgement scores following completion of the Animal Studies Literacy Program. This indicates an active period of ethical judgement development during the six-week period of the study. Providing students with the opportunity to engage with ethical concepts embedded within an imaginative text and to reflect upon the ethical decision-making processes carried out by fictional characters resulted in improved moral judgement scores. This finding suggests that the inclusion of targeted literacy programs that involve the selection of appropriate literature and the inclusion of effective reflection strategies are likely to contribute to the development of ethical understanding.

All students showed significant increase in overall empathy scores following completion of the Animal Studies Literacy Program. Male students showed the greatest increase in both cognitive and affective empathy scores, which indicates that males in the sample for this study were more receptive to the content and activities explored as part of the Animal Studies Literacy Program. This suggests that a literacy program that facilitates the exploration of aspects of ethical sensitivity can be useful in developing empathetic attitudes towards animals. Given that there is evidence to show that aspects of empathy towards animals are generalisable to empathy towards humans, this finding has particular relevance for the prevention and intervention of behaviour related to deficits in empathy.

Approximately half of the year 7 and year 8 students were assessed as performing below the expected standard of ethical understanding for year six students. The inconsistency between teacher assessments and student achievement on other measures, suggested that teachers' perceptions of students' ethical character were not a reliable assessment. This finding indicates a need for professional development addressing the assessment of ethical character as a dimension of ethical understanding. Additionally, written responses to the Animal Studies Literacy Program revealed that students portrayed five distinct levels of ethical identity and that the most frequent level demonstrated by students was the mid-level. These findings indicate that the Animal Studies Literacy Program written reflection tasks were effective in revealing insights into students' perceptions of ethical identity. The capacity to identify levels of ethical identity is beneficial to each student's recognition of ethical self and to inform teaching and assessment for ethical understanding.

Content analysis of group interviews revealed three emergent themes. The themes were categorised as *values development*, *values related to animals*, and *purpose of values*. Findings indicate that students in the sample for this study were developing a basic understanding of concepts and issues in relation to values acquisition and development, but demonstrated a greater understanding of values in relation to animals. These findings indicate that human-animal relationships play a role in children's understanding of values. The inclusion of animal-focused

learning opportunities, which facilitate the articulation and comprehension of ethical values, are likely to contribute to the overall development of ethical understanding.

In this sample of students, attitudes towards animals were positive, with all pre-test results reflecting medium or high scores. Results at post-test showed a statistically significant difference with all students completing the Animal Studies Literacy Program achieving increased scores. This indicates that the Animal Studies Literacy Program had a positive influence of students' attitudes towards animals. Given the reported mutual benefits of human-animal interactions, educational strategies that foster the development of positive attitudes towards animals have the potential to contribute to student wellbeing.

The investigation into relationships between positive attitudes towards animals and the results of the Defining Issues Test-2, Griffiths Empathy Measure-Parent Report, and Ethical Understanding Curriculum Questionnaire did not identify any significant correlations. This revealed that for the sample of students in this study, positive attitudes towards animals are a weak indicator of performance on other measures. The absence of correlations between measures has the potential to inform the design of future research.

The combined findings of this study expose an area worthy of further investigation, especially in relation to more general studies concerning the dimensional nature of ethical understanding in children. In the following sections

of this chapter, conclusions drawn from the findings of the study are presented in relation to the research questions.

7.2 Conclusions Relating to RQ1

What are the aims and approaches of animal-focused educational strategies?

Through the examination of the literature relating to established theories of moral development and current research concerning moral education, the aims of education for the promotion of ethical understanding relating to each of the dimensions of ethical understanding were defined and described in subsection 2.7.1. The identification of four aims established a context within which the aims of educational approaches to ethical development are situated and facilitated a comparison with the aims of animal-focused educational strategies summarised in section 3.13. Having identified and compared the aims of prevalent approaches to animal-focused educational strategies, it is evident that many of the stated aims are related, either explicitly or implicitly, to the aims of education for the promotion of ethical understanding.

In summary, the findings of this current research show the relevance of aims and outcomes of prevalent approaches to animal-focused educational strategies, evidence of students' positive attitudes towards animals, and the capability of children to apply knowledge of values relating to animals to understanding of values in other contexts. Given these findings, the conclusion drawn is that current

aims and approaches to animal-focused educational strategies can be expanded to explicitly focus on the development of ethical understanding.

7.3 Conclusions Relating to RQ2

What role can human-animal relationships play in fostering the development of ethical understanding in children?

In the sample of students in this study, attitudes towards animals were positive with all pre-test results reflecting medium or high scores. Results at post-test showed a statistically significant difference with 92% of students achieving increased scores. Griffiths Empathy Measure-Parent Report results gained from the analysis of pre-test post-test scores revealed a significant increase in overall empathy scores for the whole student sample. Pre-test scores of affective empathy were higher for females; however, males showed the greatest increase in both affective and cognitive empathy post-test scores. Three questions on the Griffiths Empathy Measure-Parent Report also showed that students had more empathy towards animals than towards other children. The findings from the two group interviews revealed that students were able to identify specific values relating to animals that they had not identified in relation to humans. Additionally, students' were more able to relate to animals and were more confident to articulate their thoughts when discussing animals. The use of ethical concepts, language and emotions indicate that animals might play a significant role in children's development of ethical understanding. The responses to the Animal Studies

Literacy Program revealed levels of ethical identity. Writing reflections in response to a text about animals allowed students to express thoughts about ethical issues that were not fully expressed during group interviews. Analysis of the relationship between Pet Attitudes Scale-Modified scores and results of the Defining Issues Test-2, Griffiths Empathy Measure-Parent Report, and Ethical Understanding Curriculum Questionnaire revealed no significant correlations between attitudes towards animals and the dimensions of ethical judgement, ethical sensitivity, or ethical character.

In summary, the conclusion drawn from the findings is that the role of human-animal relationships in the development of ethical understanding is attributed to identifiable characteristics. The three characteristics are the capacity of animal-focused strategies to engage children in ethical issues, encourage students to articulate and express ethical concepts, and to facilitate the provision and evaluation of education aimed at fostering the promotion of ethical understanding.

7.4 Conclusions Relating to RQ3

How can the inclusion of Animal Studies within the Australian Curriculum contribute to the aims of education to foster the promotion of ethical understanding?

The conclusions drawn for the first two research questions also contribute to the conclusions relating to research question 3. The characteristics and qualities of

Animal Studies provide opportunities for the inclusion of learning opportunities to address the aims individually and as a whole. The findings of this study are consistent with previous research showing that children generally have positive attitudes towards animals (Thompson & Gullone, 2003) and demonstrate empathy towards them (Paul, 2000), indicating that the inclusion of Animal Studies would provide learning opportunities that are likely to be engaging for children.

This current study showed that the Animal Studies Literacy Program had a significant effect on overall empathy scores for male students in the sample for this study. Given the established links between empathy deficits, violence towards animals, and domestic violence described in Literature Review Part B (e.g., Ascione & Arkow, 1999; Thompson & Gullone, 2003), this finding is of particular relevance to future considerations of educational strategies aimed at the prevention of domestic violence.

In summary, the Animal Studies Literacy Program was demonstrated to be a suitable program for invoking positive changes in ethical sensitivity and for the assessment of ethical identity; suggesting that the inclusion of curriculum-based Animal Studies has significant potential to make a positive contribution to the realisation of the aims of education to foster the promotion of ethical understanding.

7.5 Recommendations

Identification of the current aims of education for the promotion of ethical understanding, insights into the role of human-animal relationships in the development of ethical understanding in children, and the extent to which curriculum-based Animal Studies can contribute to the realisation of the aims of education for the promotion of ethical understanding has resulted in several key findings. These findings have the potential to inform future investigations in the fields of moral education and Animal Studies. The findings, analyses and conclusions of the study form the basis of the following recommendations for future research.

Recommendation 1

The small-scale case study conducted as part of this research produced meaningful insights addressing the research questions. Given the findings of this research, to produce additional insights it is recommended that future investigations be conducted over a longer period, feature a larger sample size, incorporate the collection of qualitative data from teachers and parents, and include a control group.

Recommendation 2

When assessed against the indicators of the Australian Curriculum General capability ‘Ethical Understanding’, approximately half (51%) of the students in the sample for this study performed below the standard expected for the corresponding

year level. Given that Finding 5 showed the challenge in achieving stated outcomes of the Australian Curriculum General capability ‘Ethical Understanding’, it is recommended that future research investigate educators’ understanding of the aims of education for the promotion of ethical understanding, and the use of teaching and assessment strategies designed to foster the realisation of such aims.

Recommendation 3

Given that the findings of this study indicate the potential of Animal Studies to contribute to the realisation of education for the promotion of ethical understanding aims, it is recommended that further research investigating strategies for the inclusion of Animal Studies to curriculum be considered. Additionally, insights gained from student’s perceptions of emotions and values associated with human-animal relationships indicate the need to reconsider appropriate representations of animals in the educational context.

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APPENDICES

Appendix A

Letter of approval to conduct research

Social Science Ethics Officer
Private Bag 01 Hobart
Tasmania 7001 Australia
Tel: (03) 6226 2763
Fax: (03) 6226 7148
Katherine.Shaw@utas.edu.au



HUMAN RESEARCH ETHICS COMMITTEE (TASMANIA) NETWORK

20 May 2013

Dr David Moltow
Education
Private Bag 66

Dear Dr Moltow

Re: FULL ETHICS APPLICATION APPROVAL
Ethics Ref: H0013094 - Educating Through Animals: An investigation of the contribution to students' moral development of curriculum based humane education

We are pleased to advise that the Tasmania Social Sciences Human Research Ethics Committee approved the above project on 17 May 2013.

This approval constitutes ethical clearance by the Tasmania Social Sciences Human Research Ethics Committee. The decision and authority to commence the associated research may be dependent on factors beyond the remit of the ethics review process. For example, your research may need ethics clearance from other organisations or review by your research governance coordinator or Head of Department. It is your responsibility to find out if the approval of other bodies or authorities is required. It is recommended that the proposed research should not commence until you have satisfied these requirements.

Please note that this approval is for four years and is conditional upon receipt of an annual Progress Report. Ethics approval for this project will lapse if a Progress Report is not submitted.

The following conditions apply to this approval. Failure to abide by these conditions may result in suspension or discontinuation of approval.

1. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval, to ensure the project is conducted as approved by the Ethics Committee, and to notify the Committee if any investigators are added to, or cease involvement with, the project.
2. Complaints: If any complaints are received or ethical issues arise during the course of the project, investigators should advise the Executive Officer of the Ethics Committee on 03 6226 7479 or human.ethics@utas.edu.au.

A PARTNERSHIP PROGRAM IN CONJUNCTION WITH THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

Appendices

3. Incidents or adverse effects: Investigators should notify the Ethics Committee immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
4. Amendments to Project: Modifications to the project must not proceed until approval is obtained from the Ethics Committee. Please submit an Amendment Form (available on our website) to notify the Ethics Committee of the proposed modifications.
5. Annual Report: Continued approval for this project is dependent on the submission of a Progress Report by the anniversary date of your approval. You will be sent a courtesy reminder closer to this date. **Failure to submit a Progress Report will mean that ethics approval for this project will lapse.**
6. Final Report: A Final Report and a copy of any published material arising from the project, either in full or abstract, must be provided at the end of the project.

Yours sincerely

Lauren Black
Ethics Administrator
Office of Research Services
Tel: +61 (03) 6226 2764
Email: lauren.black@utas.edu.au
University of Tasmania
Private Bag 01 Hobart Tas 7001

A PARTNERSHIP PROGRAM IN CONJUNCTION WITH THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

Appendix B

Letter of approval to conduct research in Tasmanian Catholic schools



1 August 2013

Dr David Moltow
Course Coordinator – Master of Teaching
Yorke Project Chief Investigator
University of Tasmania
Private Bag 66
Hobart TAS 7001

Dear Dr Moltow

I am writing in response to your letter received 31 July 2013 seeking permission to invite Tasmanian Catholic schools to participate in the research project *Educating Through Animals: An investigation of the contribution to students' moral development of curriculum based humane education* being undertaken by Doctoral Candidate Ms Amanda Yorke.

I have read the information provided by you and, subsequently, I am happy to provide in principle approval. Please note, however, that it is up to the individual school to determine whether they wish to participate in the study.

Please do not hesitate to contact this office if you require any further information.

Yours sincerely

Dr Trish Hindmarsh
Director

Appendix C

Information Sheet for Teachers

Locked Bag 1307 Launceston
Tasmania 7250 Australia
Phone (03) 6324 3263 Fax (03) 6324 3048
www.utas.edu.au/educ



Educating Through Animals: Investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Teacher Information Sheet

Invitation

You are invited to participate in a research study investigating what contribution to students' ethical understanding (cognitive, social and emotional and empathy development) can be made by the inclusion of an Animal Studies program in school curriculum. The study is being conducted in partial fulfilment of a PhD degree by Amanda Yorke under the supervision of: Dr David Moltow, Course Coordinator Master of Education, Faculty of Education; Associate Professor Karen Swabey, Head of School, Faculty of Education; and Dr J-F, Lecturer, Faculty of Education.

1. 'What is the purpose of this study?'

The purpose of the study is to investigate what contribution to students' ethical understanding (cognitive, social and emotional and empathy development) can be made by the inclusion of an Animal Studies program in school curriculum. The project has four aims:

- Identify the aims of moral education in relation to the Australian Curriculum.
- Apply instruments to measure levels of ethical understanding of students before and after participation in a curriculum-based Animal Studies program.
- Measure the effect of the Animal Studies program on students' ethical understanding.
- Identify the contribution to the realisation of moral education aims that can be made by a curriculum-based Animal Studies program.

2. 'Why have I been invited to participate in this study?'

You have been invited to participate in this study because you are a teacher of year 7 and/or year 8 students. Selected principals of Tasmanian schools have received an invitation for

teachers from their school to participate in this study. Your principal has distributed this Information Sheet to you on behalf of the researchers.

4. 'What does this study involve?'

If you agree to participate in the study, you will be asked to:

- Complete an assessment questionnaire for each student of their achievement of the Australian Curriculum continuum of learning outcomes. This assessment will be performed at the start and end of term two. Each assessment will take approximately 2 minutes per student.

You will be asked to provide written consent to this activity. All data used in this study will be identified only by the use of pseudonyms. The identity of the school and participants will remain anonymous. It is important to understand that your involvement in the study is voluntary. While we would be pleased to have you participate, we respect your right to decline. If you decide to decline your participation at any time, you may do so without providing an explanation. All information will be treated in a confidential manner and your name will not be used anywhere in the research. All research data will be stored in locked filing cabinets and password protected files at the Sandy Bay campus of the University of Tasmania. Access to this cabinet will be strictly limited to the researcher and co-supervisors of this study.

5. 'Are there any possible benefits from participation in this study?'

It is anticipated that participation in the project will assist you to develop your understanding of Animal Studies and its contribution to student's ethical understanding, as well as to gain greater confidence in your capacity to meet the requirements of the Australian Curriculum: general capabilities. The findings of the study may provide valuable information for the Department of Education and lead to further consideration into the aims of moral education and the assessment of ethical understanding.

6. 'Are there any possible risks from participation in this study?'

There are no specific risks anticipated with involvement in this study. Your participation is entirely voluntary and can be withdrawn, without penalty, at any stage of the study. Your identity will remain completely confidential. You will be able to view and amend interview transcripts and ask that any part of the data or all data that you have contributed be withdrawn from the study at any point during the project. If you experience discomfort as a result of any aspect of the research you are able to access free counselling provided through the Catholic Education Office.

7. 'What will happen to the information when the study is over?'

Appendices

Questionnaires, hard copies of interview transcripts, and audio files, will be stored on the Sandy Bay campus of the University of Tasmania in locked cabinets accessible only by the researchers. Names and other identifying information will be removed from these documents. Computer files will be password protected and stored on a secure server in the Faculty of Education, Sandy Bay campus. Five years after publication of the report of the project all transcripts and field notes will be shredded, computer files deleted and audio files destroyed.

8. 'How will the results of the study be published?'

The completed study will be presented as a doctoral thesis. Participants will be given access to a pdf version of the thesis upon request.

9. 'What if I have questions about this research?'

If you would like to discuss any aspect of this study, please feel free to contact any member of the research team. We would be happy to discuss any aspect of the research with you.

Amanda Yorke	Amanda.Yorke@utas.edu.au	03 6430 4986
Dr David Moltow	David.Moltow@utas.edu.au	03 6226 1946
Associate Professor Karen Swabey	Karen.Swabey@utas.edu.au	03 6324 3512
Dr J-F	J.F@utas.edu.au	03 6324 3166

This study has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [H0013094].

Thank you for taking the time to consider this study. If you wish to take part in it, please sign the attached consent forms, place them in the envelope provided and leave the sealed envelope at the school office to be collected by the researchers. This information sheet is for you to keep.

Appendix D

Consent Form for Teachers

Locked Bag 1307 Launceston
Tasmania 7250 Australia
Phone (03) 6324 3263 Fax (03) 6324 3048
www.utas.edu.au/educ



Educating Through Animals: Investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Teacher consent form –Questionnaire

1. I have read and understood the 'Information Sheet' for this project.
2. The nature and possible effects of the study have been explained to me.
3. I understand that the study involves me completing a questionnaire.
4. I understand that participation involves the risk that has been explained to me in the information sheet.
5. I understand that all research data will be securely stored on the University of Tasmania premises for five years and will then be destroyed.
6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered from me for the study may be published provided that I cannot be identified as a participant.
8. I understand that the researchers will maintain my identity confidential and that any information I supply to the researcher(s) will be used only for the purposes of the research.
9. I agree to participate in this investigation and understand that I may withdraw at any time without any effect, and if I so wish, prior to September 12th 2014 may request that any data I have supplied to date be withdrawn from the research.

Name: _____

Signature: _____

Appendices

Date: _____

Statement by Investigator

☐ I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐ The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project.

Name of investigator _____

Signature of investigator _____ Date _____

Appendix E

Information Sheet for Parents



UNIVERSITY *of*
TASMANIA

Educating Through Animals: Investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Parent Information Sheet

Invitation

You are invited to participate in a research study investigating what contribution to students' ethical understanding (cognitive, social and emotional and empathy development) can be made by inclusion of an Animal Studies program in school curriculum. The study is being conducted in partial fulfilment of a PhD degree by Amanda Yorke under the supervision of: Dr David Moltow, Course Coordinator Master of Education, Faculty of Education; Associate Professor Karen Swabey, Head of School, Faculty of Education; and Dr J-F, Lecturer, Faculty of Education.

1. 'What is the purpose of this study?'

The purpose of the study is to investigate what contribution to students' ethical understanding (cognitive, social and emotional and empathy development) can be made by engaging imaginatively with fictional text. The project has three aims:

- Identify the aims of moral education in relation to the Australian Curriculum.
- Measure the effect of an activity based on Animal Studies on students' ethical understanding.
- Identify the contribution to the realisation of moral education aims that can be made by the inclusion of an Animal Studies program in school curriculum.

2. 'Why have I been invited to participate in this study?'

You have been invited to participate in this study because you are the parent/carer of a student in Year 7 or 8. Your child's teacher has distributed this Information Sheet to you on behalf of the researchers.

3. 'What does this study involve?'

If you agree to participate in the study, you will be asked to:

- Complete a questionnaire about your child. The questionnaire will be completed in your own time at the beginning and end of a four-week period, and will take approximately 5 minutes each time to complete.

You will be asked to provide written consent for this activity. All data used in this study will be identified only by the use of pseudonyms. The identity of the school and participants will remain anonymous. It is important to understand that your involvement in the study is voluntary. While we would be pleased to have you participate, we respect your right to decline. If you decide to decline your participation at any time, you may do so without providing an explanation and any data you give may be withdrawn before the date specified on the consent form. All information will be treated in a confidential manner and your name will not be used anywhere in the research. All research data will be stored in locked filing cabinets and password protected files at the Sandy Bay campus of the University of Tasmania. Access to this cabinet will be strictly limited to the researcher and co-supervisors of this study.

4. 'Are there any possible benefits from participation in this study?'

It is anticipated that participation in the project will give you the opportunity to reflect on your responses to the questionnaires. The findings of the study may provide your teacher with greater understanding of student's ethical understanding; and enable them to identify areas of teaching and learning that might require further support.

5. 'Are there any possible risks from participation in this study?'

There are no specific risks anticipated with involvement in this study. Your participation is entirely voluntary and can be withdrawn, without penalty, at any stage of the study. Your identity will remain completely confidential. You will be able to ask that any part of the data or all data that you have contributed be withdrawn from the study at any point during the project. If you experience discomfort as a result of any aspect of the research you are able to access free counselling provided through the Catholic Education Office.

6. 'What will happen to the information when the study is over?'

Questionnaires will be stored on the Sandy Bay campus of the University of Tasmania in locked cabinets accessible only by the researcher, co-supervisors and authorised staff from the UTAS Graduate Research Office. Names and other identifying information will be removed from these documents. Computer files will be password protected and stored on a secure server in the Faculty of Education, Sandy Bay campus. Five years after publication of the report of the project, all hard copies of data will be shredded and computer files will be deleted.

7. 'How will the results of the study be published?'

The completed study will be presented as a doctoral thesis. Participants will be given access to a pdf version of the thesis upon request.

8. 'What if I have questions about this research?'

If you would like to discuss any aspect of this study, please feel free to contact any member of the research team. We would be happy to discuss any aspect of the research with you.

Amanda Yorke	Amanda.Yorke@utas.edu.au	0409066800
Dr David Moltow	David Moltow@utas.edu.au	03 6226 1946
Associate Professor Karen Swabey	Karen.Swabey@utas.edu.au	03 6324 3512
Dr J-F	J.F@utas.edu.au	03 6324 3166

This study has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote H0013094.

Thank you for taking the time to consider this study. If you wish to take part in it, please sign the attached consent forms, place them in the envelope provided and leave the sealed envelope at the school office to be collected by the researchers. This information sheet is for you to keep.

Appendix F

Information Sheet for Parents of Students



UNIVERSITY *of*
TASMANIA

Educating Through Animals: Investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Parent/carer of student Information Sheet

Invitation

Your child is invited to participate in a research study investigating what contribution to students' ethical understanding (cognitive, social and emotional and empathy development) can be made by the inclusion of an Animal Studies Literacy program in school curriculum. The study is being conducted in partial fulfilment of a PhD degree by Amanda Yorke under the supervision of: Dr David Moltow, Course Coordinator Master of Education, Faculty of Education; Associate Professor Karen Swabey, Head of School, Faculty of Education; and Dr J-F, Lecturer, Faculty of Education.

1. 'What is the purpose of this study?'

The purpose of the study is to investigate what contribution to students' ethical understanding (cognitive, social and emotional and empathy development) can be made by the inclusion of an Animal Studies program in school curriculum. The project has three aims:

- Identify the aims of moral education in relation to the Australian Curriculum.
- Measure the effect of an activity based on Animal Studies on students' ethical understanding
- Identify the contribution to the realisation of moral education aims that can be made by the inclusion of Animal Studies in schools.

2. 'Why has my child been invited to participate in this study?'

Your child has been invited to participate in this study because he/she is a student in Year 7 or 8. Principals of selected Tasmanian primary schools have received an invitation for teachers from their school to participate in this study. Your teacher has distributed this Information Sheet to you on behalf of the researchers.

3. 'What does this study involve?'

If your child agrees to participate in the study, he/she will be asked to:

- Complete an online questionnaire about his/her responses to 5 short moral dilemmas. This will take approximately 30 minutes.
- Complete a written questionnaire about his/her attitudes towards animals. This will take approximately 20 minutes.
- He/she will also be asked to attend a short audio-recorded focus group with other students where he/she will be asked to answer a few short questions and to discuss his/her experiences of the research activities. The focus groups will take approximately 15 minutes.
- He/she will also be given a selected book and take part in an independent reading activity.

Each of these activities will take place over a 4-week period, during normal class time.

You will be asked to provide separate written consent to each of these activities. All data used in this study will be identified only by the use of pseudonyms. The identity of the school and participants will remain anonymous. It is important to understand that your child's involvement in the study is voluntary and that any data he/she gives may be withdrawn before the date specified on the consent form. While we would be pleased to have your child participate, we respect your right to decline. If you decide to decline your child's participation at any time, you may do so without providing an explanation. All information will be treated in a confidential manner and your child's name will not be used anywhere in the research. All research data will be stored in locked filing cabinets and password protected files at the Sandy Bay campus of the University of Tasmania. Access to this cabinet will be strictly limited to the researcher, co-supervisors and authorised staff from the UTAS Graduate Research Office.

4. 'Are there any possible benefits from participation in this study?'

It is anticipated that participation in the project will give your child the opportunity to reflect on his/her responses to the questionnaires. The findings of the study may provide your teacher with greater understanding of student's ethical understanding; and enable them to identify areas of teaching and learning that might require further support.

5. 'Are there any possible risks from participation in this study?'

There are no specific risks anticipated with involvement in this study. Your child's participation is entirely voluntary and can be withdrawn, without penalty, at any stage of the study. Your child's identity will remain completely confidential. You will be able to view and amend focus group transcripts and ask that any part of the data or all data that you have contributed be withdrawn from the study at any point prior to a date one week after completion of the research activities. It is possible that your child may experience mild emotional discomfort, such as sadness when remembering the loss of a pet, or embarrassment during a focus group. If your child experiences discomfort as a result of any aspect of the research he/she may speak to his/her teacher, principal or the school psychologist.

6. 'What will happen to the information when the study is over?'

Questionnaires, hard copies of interview transcripts, and audio files, will be stored on the Sandy Bay campus of the University of Tasmania in locked cabinets accessible only by the researchers. Names and other identifying information will be removed from these documents. Computer files will be password protected and stored on a secure server in the Faculty of Education, Sandy Bay campus. Five years after publication of the report of the project all transcripts and field notes will be shredded, computer files deleted and audio files destroyed.

7. 'How will the results of the study be published?'

The completed study will be presented as a doctoral thesis. Participants will be given access to a pdf version of the thesis upon request.

8. 'What if I have questions about this research?'

If you would like to discuss any aspect of this study, please feel free to contact any member of the research team. We would be happy to discuss any aspect of the research with you.

Amanda Yorke	Amanda.Yorke@utas.edu.au	0409066800
Dr David Moltow	David.Moltow@utas.edu.au	03 6226 1946
Associate Professor Karen	Karen.Swabey@utas.edu.au	03 6324 3512

Appendices

Swabey		
Dr J-F	J.F@utas.edu.au	03 6324 3166

This study has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote H0013094.

Appendix G

Consent Form for Parents



UNIVERSITY of
TASMANIA

Educating Through Animals: Investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Parent/Carer consent form - Questionnaire

1. I have read and understood the 'Information Sheet' for this project.
2. The nature and possible effects of the study have been explained to me.
3. I understand that the study involves me completing a questionnaire.
4. I understand that participation involves the risk that has been explained to me in the information sheet.
5. I understand that all research data will be securely stored on the University of Tasmania premises for five years and will then be destroyed.
6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered from me for the study may be published provided that I cannot be identified as a participant.
8. I understand that the researchers will maintain my identity confidential and that any information I supply to the researcher(s) will be used only for the purposes of the research.
9. I agree to participate in this investigation and understand that I may withdraw at any time without any effect, and if I so wish, prior to September 12th 2014 I may request that any data I have supplied to date be withdrawn from the research.

Appendices

Name of Parent/carer:

Signature:

Name of student:

Date:

Statement by Investigator

☐

I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐

The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project.

Appendix H

Consent Form for Parents of Students



UNIVERSITY *of*
TASMANIA

Educating Through Animals: Investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Parent/Carer Consent Form

1. I have read and understood the Information Sheet for this project.
2. The nature and the possible effects of the project have been explained to me.
3. I understand that my child's involvement in this study may involve the following activities:
 - a. Completion of a questionnaire about his/her responses to moral dilemmas. The questionnaire will be administered during normal class time near the beginning and at the end of a four-week period. The survey should take about 30 minutes each time to complete.
 - b. Completion of a questionnaire about his/her attitudes towards animals. The questionnaire will be administered during normal class time near the beginning and at the end of a four-week period. The survey should take about 20 minutes each time to complete.
 - c. A focus group about his/her understanding of ethical concepts and his/her experiences during the research activities. Focus groups will be conducted at the school during the school day. Focus groups will last about 15 minutes and will be audio-recorded.
4. I understand that participation in this aspect of the research involves only low risk with the only foreseeable risk being discomfort during the focus group.

Appendices

5. I understand that all research data will be securely stored on the University of Tasmania premises for at least 5 years, and will be destroyed when no longer required.
6. I agree to my child's involvement in the following aspects of the research (please tick all that apply):

The two questionnaires _____

Audio-recorded focus group _____

7. I agree that research data gathered from my child for the study may be published provided that he/she cannot be identified as a participant.
8. I understand that the researcher will maintain my child's identity confidential and that any information he/she supplies to the researchers will be used only for the purpose of the research.
9. I agree to my child's participation in this investigation (as indicated at 6, above) and understand that I may withdraw my consent at any time until the end of the study without any explanation or effect. If I so wish, prior to September 12th 2014 I may request that any data my child has supplied to date may be withdrawn from the research.

Name of parent/carer:

Signature:

Name of student:

Signature:

Date:

Statement by Investigator

☐

I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐

The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project.

Name of investigator _____

Signature of investigator _____ Date _____

Appendix I

Consent Form for Students



UNIVERSITY *of*
TASMANIA

Educating Through Animals: Investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Student Consent Form

1. I have read and understood the Information Sheet for this project.
2. The details of the project have been explained to me.
3. I understand that I might be asked to do the following activities:
 - a. Complete a questionnaire about my responses to short stories. The questionnaire will be completed during normal class time at the beginning and end of a four-week period. This should take about 30 minutes each time to complete.
 - b. Complete a questionnaire about my feelings about animals. The questionnaire will be completed during normal class time at the beginning and end of a four-week period, this should take about 20 minutes each time to complete.
 - c. Attend a focus group about my understanding of ethical concepts and my experiences during the learning program. Focus groups will take place at the school during the school day. Interviews will last about 15 minutes and will be audio-recorded.

Appendices

4. I understand that taking part in this research involves only low risk with the only possible risk being discomfort during focus groups.
5. I understand that all information for the study will be securely stored at the University of Tasmania for at least 5 years, and will be destroyed when no longer needed.
6. I agree to take part in the following aspects of the research (please tick all that apply):
- The two questionnaires ____
- Audio-recorded focus group ____
7. I agree that information I give for the study may be published provided that nobody will know who I am.
8. I understand that the researcher will keep my identity confidential and that any information I supply to the researchers will be used only for the purpose of the research.
9. I agree to take part in this study and understand that prior to September 7th 2014 I may change my mind and choose not to take part and that any information I have given will not be used for the study.

Name of Parent/carer:

Signature:

Name of student:

Date:

Statement by Investigator

☐ I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐ The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project.

Name of investigator

Appendices

Signature of investigator

Date

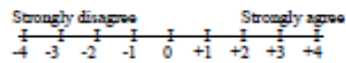
Appendix J

Griffiths Empathy Measure-Parent Report (GEM-PR)

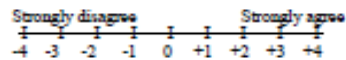
Child's name: GEM-PR
Completed by: ☐ Mother ☐ Father ☐ Other

Please read each statement below and indicate the extent to which you agree or disagree. Mark your answers by placing a cross on the appropriate point on the line. Do not leave any statement unrated.

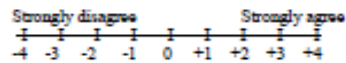
Example: If you somewhat agree with the statement, you would place a cross as indicated below.



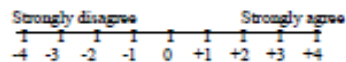
1. It makes my child sad to see another child who can't find anyone to play with.



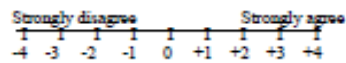
2. My child treats dogs and cats as though they have feelings like people.



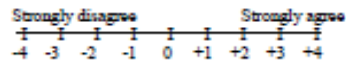
3. My child reacts badly when he/she sees people kiss and hug in public.



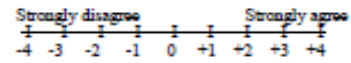
4. My child feels sorry for another child who is upset.



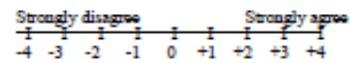
5. My child becomes sad when other children around him/her are sad.



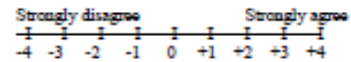
6. My child doesn't understand why other people cry out of happiness.



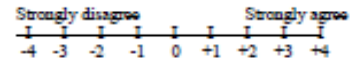
7. My child gets upset when he/she sees another child being punished for being naughty.



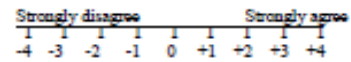
8. My child seems to react to the moods of people around him/her.



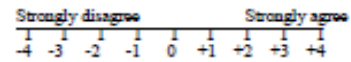
9. My child gets upset when another person is acting upset.



10. My child likes to watch other people open presents, even when he/she doesn't get one themselves.



11. Seeing another child who is crying makes my child cry or get upset.



Appendices

Child's name: GEM-PR
 Completed by: ☐ Mother ☐ Father ☐ Other

Please read each statement below and indicate the extent to which you agree or disagree. Mark your answers by placing a cross on the appropriate point on the line. Do not leave any statement unrated.

12. My child gets upset when he/she sees another child being hurt.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

13. When I get sad my child doesn't seem to notice.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

14. Seeing another child laugh makes my child laugh.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

15. Sad movies or TV shows make my child sad.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

16. My child becomes nervous when other children around him/her are nervous.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

17. It's hard for my child to understand why someone else gets upset.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

18. My child gets upset when he/she sees an animal being hurt.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

19. My child feels sad for other people who are physically disabled (e.g., in a wheelchair).

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

20. My child rarely understands why other people cry.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

21. My child would eat the last cookie in the cookie jar, even when he/she knows that someone else wants it.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

22. My child acts happy when another person is acting happy.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

23. My child can continue to feel okay even if people around are upset.

Strongly disagree Strongly agree
 -4 -3 -2 -1 0 +1 +2 +3 +4

Appendix K

Sample of DIT-2 Australian Primary Version

Defining Issues Test-2 Australian Primary Version					
4. Story 1					
Famine					
<p>The small village in northern India has experienced shortages of food before, but this year's famine is worse than ever. Some families are even trying to feed themselves by making soup from tree bark. Mustaq Singh's family is near starvation. He has heard that a rich man in his village has supplies of food stored away and is hoarding food while its price goes higher so that he can sell the food later at a huge profit. Mustaq is desperate and thinks about stealing some food from the rich man's warehouse. The small amount of food that he needs for his family probably wouldn't even be missed.</p>					
<p>*1. What should Mustaq Singh do? Do you favour the action of taking food?</p> <p> <input type="radio"/> Should take the food <input type="radio"/> Can't decide <input type="radio"/> Should not take the food </p>					
<p>*2. Rate the following issues in terms of importance.</p>					
	Great	Much	Some	Little	No
1. Is Mustaq Singh courageous enough to risk getting caught for stealing?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Isn't it only natural for a loving father to care so much for his family that he would steal?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Shouldn't the community's laws be upheld?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Does Mustaq Singh know a good recipe for preparing soup from tree bark?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Does the rich man have any legal right to store food when other people are starving?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Is the motive of Mustaq Singh to steal for himself or to steal for his family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. What values are going to be the basis for social cooperation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Is the epitome of eating reconcilable with the culpability of stealing?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Does the rich man deserve to be robbed for being so greedy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Isn't private property an institution to enable the rich to exploit the poor?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Would stealing bring about more total good for everybody concerned or wouldn't it?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Are laws getting in the way of the most basic claim of any member of a society?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix L

Approved Modifications to DIT-2

Memorandum of Agreement
DIT-2 Story Change

The Office for the Study of Ethical Development at the University of Alabama grants Amanda Yorke permission on her/his changes of the content of DIT-2 stories and the appropriate use of the DIT-2 with these conditions:

(1) Permission is given for the specific project described in the letter of _____ . This permission does not extend to additional projects nor to other researchers at other institutions beyond those specifically mentioned in this letter.

(2) Permission is given only for changing the following parts in DIT-2 stories:

	Current version	Requested changes
Title	Defining Issues Test 2-US version	Defining Issues Test 2-Australian Primary Version
Page 2	Sitting	Session
Page 3	Presidency of United States	Prime Minister of Australia
Story 2	Lieutenant Governor	Premier
Story 3	School Board District 190	School Board Northern Region
Story 5	Campus	University Campus
Additional spelling changes	Favor Realize	Favour Realise

(3) Permission is given for one year. At the time of expiration, the applicant may reapply to the Office.

(4) The applicant is responsible for duplicating copies of translated DIT-2 and for affixing the appropriate copyright information on each form, as follows:

“©Copyright by James Rest and Darcia Narvaez, 1998. All Rights Reserved.”

Appendix M

Ethical Understanding Curriculum Questionnaire (EUCQ)

	<p>Ethical Understanding Curriculum Questionnaire</p> <p>Asses each student's ability to understand/demonstrate each criteria according to the following scale:</p> <p>A = indicates that a student is performing well above the standard expected B = indicates that a student is performing above the standard expected C = indicates that a student is performing at the standard expected D = indicates that a student is approaching the standard expected E – indicates that a student is performing below the standard expected</p>
	Recognise ethical concepts
1	Explains ethical concepts such as truth and justice that contribute to the achievement of a particular outcome
2	Understands the difference between an honest mistake and intentional deception
	Explore ethical concepts in context
3	Explains what constitutes an ethically better or worse outcome and how it might be accomplished
4	Understands the consequences for individuals of others' actions, in a range of scenarios
	Reason and make ethical decisions
5	Explains the reasons behind there being a variety of ethical positions on a social issue
6	Recognises conflicting media reports about the same event
	Consider consequences
7	Explains the consequences of actions in familiar and hypothetical scenarios
8	Understands possible consequences of including or excluding a person or group

Appendices

	Reflect on ethical action
9	Articulates a range of ethical responses to situations in various social contexts
10	Able to weigh the relative merits of actions to prevent harm to animals
	Examine values
11	Identifies values accepted and enacted within various communities
12	Recognises instances where equality, fairness, dignity and non-discrimination are required
	Explore rights and responsibilities
13	Demonstrates consistency between rights and responsibilities when interacting face-to-face or through social media
14	Understands differences between freedom of speech and destructive criticism in debates or through social media
	Consider points of view
15	Explains a range of possible interpretations and points of view when thinking about ethical dilemmas
16	Identifies biased research findings

Appendix N

Animal Studies Literacy Program



Wringer

By

Jerry Spinelli

Literacy Program designed by Amanda Yorke

Student Name _____

Class _____

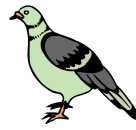
Birthdays are an obsession where Palmer comes from, but if turning a year older means initiation into a violent practice he despises, he'd rather not. Unfortunately, Palmer cannot stop time any more than he can change tradition. So as this next and most important birthday approaches, Palmer knows it's now or never. Something must be done.

Jerry Spinelli

Instructions

The book has been divided into nine sections. The end of each section is marked with a sticker.

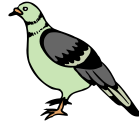
1. Read the first section.
2. When you reach the sticker you may complete the questions for that section. Read the questions carefully and refer back to the book to help you provide your answers. If you need more space for writing, please use the back of the page or the spare paper provided.
3. When you have answered all the questions you may read the next section.



Introduction section (chapters 1 & 2) pages 1-8

1. Write a brief summary of the first section. Include details about the main character.

2. How are you feeling about reading the rest of the story?



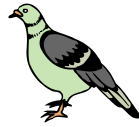
Section One (chapters 3-6) pages 9-30

3. What is the "Treatment" and why is it significant? How do Palmer's parents feel about the "Treatment"?

4. Palmer receives a gift from his Dad. What is this gift and why is it important? What do they symbolise?

5. This section ends with Palmer thinking, *you have run out of birthdays*. What do you think this means?

6. How would you feel if you were in Palmer's shoes?

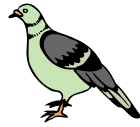


Section Two (chapters 7-12) pages 31-62

7. The book contains a split at the end of chapter 12, why do you think the author did this?

8. Make a prediction: Who is Nipper?

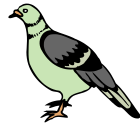
9. What do you hope will happen in the next section of the book? Why?



Section Three (chapters 13-16) pages 65-83

10. At the beginning of this section Palmer ignored the pigeon and called him names such as 'dumb' or 'stupid.' Why did he do this? Did he really think the bird was stupid?

11. Have you ever been mean to someone when you felt uncomfortable? If so, why do you think you were?

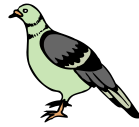


Section Four (chapters 17-22) pages 84-112

12. Palmer borrows a book from the library without checking it out. Why does he fear the librarian? Does he plan to keep the book?

13. At the very end of this section Palmer blurts out a secret. Who does he tell and why does he choose this person?

14. Have you ever kept a secret about something somebody has done that you knew was wrong? How did it make you feel?

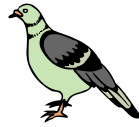


Section Five (chapters 23-26) pages 115-140

15. Palmer is afraid to go home at the end of this section. Why is he afraid? What does he do to make sure he stays late after school? What would you have done to make sure you had to stay late after school?

16. Do you think Palmer usually gets in trouble? Why or why not?

17. How do you feel when other people get in trouble?

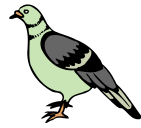


Section Six (chapters 27-31) pages 141-169

18. Did Palmer attend wringer training? Do you think he will give in to peer pressure and participate in the Family Fest shootings even though he feels it is wrong? Why or why not?

19. One of the boys in the gang warned Palmer about the visit. Who do you think it was and what does this action say about his character? Why do you feel this way?

20. What is the trick Nipper learns? Do you think pigeons are intelligent?

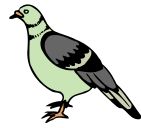


Section Seven (chapters 32-37) pages 170-200

21. Palmer has allowed his emotions to build during the last sections of the book. How do his emotions explode in chapter 32? Predict how the boys in the gang will react to him now.

22. Palmer makes a difficult decision in this section. How does he plan to save Nipper from Family Fest and the boys?

23. We get to know Beans a little better in this section. Describe him. Do you think Beans wants to listen to Mutto? Why or why not?



Section Eight (chapters 38-40) pages 201-226

24. A child at the end of the story says "Can I have one too Daddy?" asking to have a pet pigeon. What impact do you think Palmer's actions had on the crowd?

25. We often hear the phrase "to lead by example." How did Palmer lead by example in the story?

26. How can you, as a student, help to create change by your examples? Make a list of at least three things that you could do.

Appendix O

Pet Attitude Scale – Modified (PAS-M)

Pet Attitude Scale – Modified

Please answer each of the following questions as honestly as you can, in terms of how you feel right now. Please answer by circling one of the following seven numbers for each question:

1. I really like seeing pets enjoy their food.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

2. My pet means more to me than any of my friends do

Or

If I had a pet it would mean more to me than any of my friends do

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

3. I would like to have a pet in my home.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

4. Having pets is a waste of money.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

Appendices

5. House pets add happiness to my life

Or

If I had a house pet it would add happiness to my life

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

6. I feel that pets should always be kept outside.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

7. I spend time every day playing with my pet

Or

If I had a pet I would spend time every day playing with it

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

8. I have occasionally communicated with my pet and understood what it was trying to communicate to me.

Or

If I had a pet I would communicate with it and understand what it tries to communicate to me.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Unsure	Slightly Agree	Moderately Agree	Strongly Agree

Appendices

9. The world would be a better place if people would stop spending so much time caring for their pets and started caring more for other humans instead.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

10. I like to feed animals out of my hand.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

11. I love pets.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

12. Animals belong in the wild or in zoos, but not in the home.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

13. If you keep pets in the house you can expect a lot of damage to furniture.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

14. I like house pets.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

Appendices

15. Pets are fun but it's not worth the trouble of owning one.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

16. I frequently talk to my pets.

Or

If I had a pet I would talk to it.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

17. I hate animals.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

18. You should treat your house pets with as much respect as you would a human member of your family.

1	2	3	4	5	6	7
Strongly	Moderately	Slightly	Unsure	Slightly	Moderately	Strongly
Disagree	Disagree	Disagree		Agree	Agree	Agree

Appendix P

Student Interview Schedule

Locked Bag 1307 Launceston
Tasmania 7250 Australia
Phone (03) 6324 3263 Fax (03) 6324 3048
www.utas.edu.au/educ



Educating Animals: investigating the contribution to students' ethical understanding of curriculum-based Animal Studies.

Student Interview Schedule

Introduction

The following explanation of the research study will be given to the participant:

Inclusion of moral education in the Australian Curriculum is most evidently directed towards the fostering of knowledge, behaviour and empathy through the development of such explicit competencies as ethical behaviour, and personal and social capability; however, there is currently no provision for the effective measurement of progress or achievement. This study aims to address the problem by identifying the aims of moral education in relation the Australian Curriculum and applying a set of measures that will effectively measure the outcomes of a curriculum-based Animal Studies program designed to realise those aims.

Attention will be directed towards the Participant Information Sheet and Consent Form, which contain details regarding the way in which the research will be conducted, the role of the participant and the rules of confidentiality. The participant will be given an opportunity to request clarification of any information before confirming their consent to participate in the interview process.

The participant will be asked to give permission for the interview to be recorded using a digital voice recorder. If permission is declined, consent for the interview to be recorded using hand written notes will be requested.

As an introduction to the questioning process, participants will be asked to give a brief outline of the grade level currently taught and the total number of years they have been teaching.

The following questions will serve as the primary focus for the interview however, it is expected that participants' responses to the questions may elicit subordinate questions, which will be explored as appropriate.

Questions

1. What is your understanding of each of the following terms:
 - Ethical
 - Empathy
 - Humane
 - Moral development
2. Moral education aims to support children's moral development. How is this achieved?
 - Please give some examples of lessons, routines or activities at school that you believe have the aim of supporting moral development?
 - How do you believe moral development is measured?

3. Do you believe that learning about, and interacting with animals can play a role in moral development?
 - If so; in what ways do you believe that animals contribute to children's moral development?
 - Do you believe children's interactions with and/or attachments to animals contribute to children's moral development?
4. What is your understanding of the term Humane Education?
 - What are your experiences of Humane Education?
5. In what ways might Humane Education contribute to the realisation of moral education aims:
 - Generally?
 - In relation to the Australian Curriculum?
6. What contribution to students' moral development (cognitive; social and emotional, and empathy development) do you believe can be made by the inclusion of Humane Education in a school curriculum?

Final question: are there any other experiences or further information that you would like to tell me about?

